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A "THOROUGHLY UP-TO-DATE SOCIETY."

FOLLOWING on the address of the President of the Royal Institute of British Architects we have had the address of the President of the Society of Architects, himself a Fellow of the Institute. We do not propose to make any comparison between the two addresses which are available for those who are interested, and, probably, Mr. Tubbs made out the best case possible for the existence of the Society of which he is the official head. Almost in every centre where a corporate body has attained the power and prestige of the Royal Institute a group of men have disassociated themselves from its action and formed an independent organisation for the expression of their views. The origin of the Society of Architects was probably due to the same cause. Its principal object, according to its Presidential addresses, for many years has been, and still is, the promotion of an Act of Registration. Broadly speaking, that policy has been its main *raison d'être*. It has not, however, made any appreciable progress in Parliament with the various Bills which it has promoted; but we do not doubt, and have never doubted, the good faith of the Society in its Registration policy. We do not propose to touch upon principles involved in the question of Registration, which have been sufficiently discussed, beyond saying that, whether the policy be advisable in the higher interests of the profession or not, whether it is ever likely or not to succeed in Parliament in view of the vested interests of other professions which will be represented in opposition on the floor of the House of Commons, we may be certain that no Act of Registration will bring about the architectural millennium as predicted by its more ardent supporters. But our purpose in referring to the address of the President of the Society of Architects is not to raise the question of Registration, but to refer incidentally to one or two other points. Those who have either heard or read it will no doubt be a little surprised at the concluding remarks of Mr. Tubbs, in which, after pointing out that Licentiates of the Institute can only become Fellows after submitting themselves to the test of examination, he goes on to say: "How Licentiates feel about this I do not know; but possibly some, or even many, of them would rather be corporate members of a progressive and thoroughly up-to-date society, making for reform all the time, than merely non-corporate members of the senior body."

We are at a loss to understand how Mr. Tubbs, either in his position as a Fellow of the Institute or as the mouthpiece of another society, could lend himself to that statement, the purpose of which is certainly obvious, and even susceptible of harsher criticism. We hold no brief for the Royal Institute of British Architects, but, so far as a forward policy is concerned, we doubt that in its history the members have often heard expounded a more progressive and authoritative programme from the Presidential Chair, touching so wide an area of architectural art, education, and practice, than that placed by Mr. Blomfield before its members at the opening meeting. The amusing part of the business is that, while Mr. Tubbs is offering a bait which would enable Licentiates to become corporate members of another society without subjecting them to the test which the Institute imposes, he is also promulgating a new system of architectural education; he is concerned with "eliminating those who do not show sufficient artistic ability to become successful practising architects of the high standard that the future

will demand!" It is generally recognised that architectural education has in the past suffered from lack of the co-ordination and system which have operated in other countries. The main tendency of architectural effort for the last fifty years has been directed towards the solution of this very difficult problem. Its solution in the end may be discovered, as Professor Lethaby has suggested in one of his inspired observations, in the recognition of architecture in a sort of morphological aspect in which we "will start from the simple cell and relate to it the most complex structures." A good deal might be said about that, but it has little to do with our present point. Any solution of the educational question is fraught with numerous difficulties, except that perhaps of Mr. Tubbs. "A Special Committee," he tells us, "are already actively at work on the details of a scheme for the establishment of architectural ateliers in the United Kingdom on the lines of those which are so successfully carried on in Paris." Nothing could be more simple—the importation of the latest confection from M. Worth or the Rue de la Paix is, as it were, on the counter; a *mannequin*, or a graduate of the Beaux-Arts, will show you how well it fits. That is all! But is it all? The Beaux-Arts system of training has answered very well in France; but it was of slow and perfectly natural growth, which followed on the foundation of l'Académie Royale by Louis XIV. or his Minister, Colbert. It is not in any sort a transplantation. Its growth is indigenous to the soil and the genius of the French nation, a logical, Latin race. In the Latin races there is also a certain quality of egotism, so far as artistic matters are concerned, which impresses the world, but to which men nourished on British soil are to a great extent strangers. Almost in every phase of creative expression—in architecture, in poetry, in drama, in painting, in romantic literature—the British race has, however, excelled. Is it even necessary to mention names—Shakespeare, Inigo Jones and Wren, Coleridge and Wordsworth, Reynolds, Turner and Constable, Charles Barry, Elmes and Cockerell, Fielding, Scott, Dickens and Thackeray, and so on? Through the force of native genius it has always come through, after its modest, instinctive fashion, to the finest and most individual interpretation of life, which is called art known to the world. In science it has given us a Darwin, a Lister, and many another. In the realm of archæology and archæological research it has contributed men of as eminent gifts as any other nation. Since the Renaissance, British architects have been among the first to extend our knowledge of the subtleties which existed in classical architecture: the pioneer spade-work of Stuart and Revett, Robert Adam, Inwood and Penrose was not second in importance to that of the men of any other country and of their time. Education in its highest sense is not, after all, altogether a matter of the schools: it is often a matter of personal idiosyncrasy. In architecture certainly many instances could be cited.

It may be argued that men of the type we have mentioned existed in spite of our educational system. It could just as well be argued that they existed because of it. But we are free to acknowledge that what may answer in regard to the individual may not answer in regard to the system of training of a whole profession. No body of men has realised this more seriously than the Royal Institute of British Architects, or devoted more time and careful thought to its solution. So long ago as 1887 a Conference was held on the subject, the members of which had before them the programmes which then prevailed in other countries. For the last twenty-five years it has elaborated and conducted a system of examination in architecture. Within quite recent times it has formed the Board of Architectural Education, composed of representative men in architecture, with a view of further developing the educational system. The work of that Board is still in its initial stages, and, while the character of the men of which it is composed is a sufficient guarantee that no hasty and ill-digested scheme will be adopted, it also ensures that enlightened progress will follow in the footsteps of their labours. In any case, we are not inclined to take a pessimistic view of the result of the work which has been undertaken in this country on behalf of the education of architects. On the contrary, we consider that in capacity and enthusiasm, and to a large extent in scholarly equipment, we possess a fine body of students. The average quality may not be high—is it ever in any profession or art?—but the quality of individual students—the quality, that is, of the select few, on whom rest our hopes for the architecture of the future, does not occasion in us any fear that we shall be outpaced, even in monumental compositions, by our Continental brethren. The work of the Institute in the past is to-day bearing fruit. So far as the establishment of the atelier system all over the country is concerned (for Mr. Tubbs' scheme is apparently a wholesale affair), we wonder if his Committee realises the atmosphere which exists in a French atelier? How many fluent advocates of schemes of this kind have, we wonder, ever crossed the doors of a French atelier or sought counsel from English students who have been trained in Paris? Such inquiries might probably prove illuminating. It must not be thought, from what we have just said, that we have any objection to the atelier phase in an architectural curriculum as it exists in France. We only wish to point out that its adoption, unrelated to a general scheme and borrowed from another country, denotes a curious misapprehension of the French view. Instead of "making for reform," it is more calculated to make for reaction and a bizarre kind of dilettanteism.

We will only touch on one other point in the address of the President of the Society of Architects. We do not know what the members of the Council of the Institute think of the suggestion that they should be left to perform the "ornamental" work of the architectural profession and relegate to the Society matters which are called its "business side." But what other society could so well look after the various material interests of architects as the chartered body at Conduit-street, whose members, it may be safely said, are responsible for the most important architectural work carried out in the United Kingdom? We have on more than one occasion referred to the kind of criticism which regards with suspicion the business qualifications of anyone who does not first of all proclaim that he is a business man. The Institute has, in any case, Standing and other Committees established for the purpose of dealing with the business issues of the profession which from time to time arise. But are not the higher aspects of architectural art and its professional and material aspect integral parts of the same organism? You cannot separate the two without damaging the whole structure. And as a mere business proposition it would perhaps be interesting, if it were worth while, to compare the points which make for real practical progress in the art and practice of architecture which have been raised by the recent addresses at the Royal Institute of British Architects and the "thoroughly up-to-date Society." As we have said, the latter Society may have a useful purpose to fulfil, but it is indiscreet for it to indulge in ill-digested programmes. It has to a certain extent influenced the Institute in regard to the policy of Registration. That body has, in any case, formed an influential Committee, committed to the consideration of the question and the promotion of a Bill likely to have some chance of conciliating the various interests involved in the matter before it has the remotest chance of succeeding in Parliament—a method of procedure which is surely eminently practical and "businesslike." But the Society is not content with this sane approach to a complicated measure; it must needs proceed, willy-nilly, with its own Bill, which has not the shade of a shadow's possibility of getting further than the blocking stage in the face of the opposition that will certainly be brought against it. Child's play of this kind may be amusing, but it serves no useful purpose, either in the higher interests or the merely practical politics of architecture.

NOTES.

Too Conscious Art.

In these days we have, as architects, become so sensitively self-conscious of Art that it is expedient, for our very Art's sake, that we should occasionally have the truth brought home to us that beauty in architecture, as in all else, must draw sustenance from roots well grounded in the everyday matter of fact of practical life. In this consists the interest and value of such papers as that read by Mr. Horace Cubitt at the Architectural Association last Monday evening. We are constantly being reminded of our high calling as artists. But in practical experience this is susceptible of two interpretations. Firstly, the architect is the arranger, the orderer, the constructive artist, who, out of many material and sometimes conflicting factors and

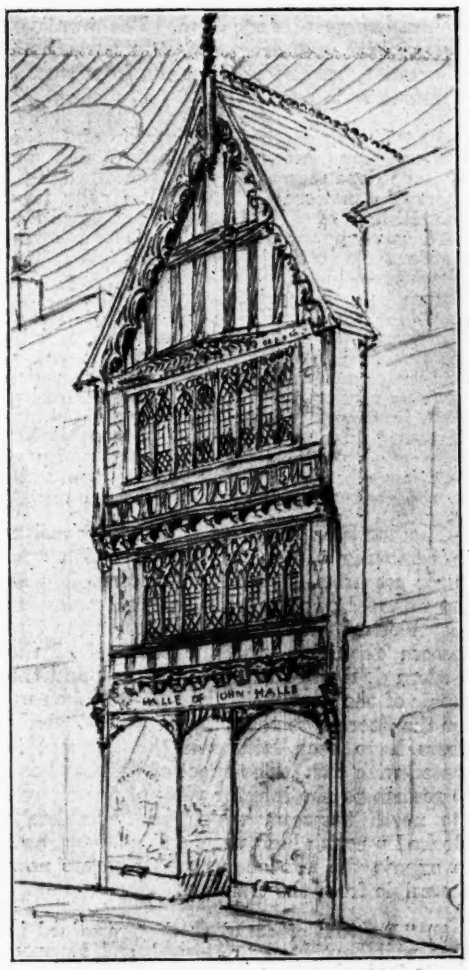
conditions, creates a unity that not only meets all practical requirements, but convinces the intellect of efficiency, and produces upon the sensuous and deeper æsthetic faculties of the mind feelings of pleasure and satisfaction in its perfect truth and fitness. Secondly, architecture is regarded as an art of free expression; and beauty is directly aimed at otherwise than through the development of organic properties, the architect thereby tending to become a kind of glorified house decorator and art—in detachment from practical and utilitarian exigencies—a more or less anæmic conceit. In the first case beauty is organic, in the second a decoration or clothing. Power of design is what discriminates the architect from other constructors. But, as things are, this is apt to limit design to a function which, however scholarly and cultured, is but superficial—to what a well-known writer on economics called, somewhat too contemptuously, "the otiose function of a designer." The power of design must be structural as well as æsthetic. Nor does the fact that the architect must indeed be artist and designer in a fuller sense preclude other essential functions. If he be versed in the valuation and cost of buildings, in building law and contracts, light and air, drainage, artificial lighting and heating, ventilation, etc.; if he survey building sites, and carry out other functions of the surveyor, he is still within his own proper field, for, being architect, he is *ipso facto* surveyor. He is not merely a draughtsman designer of plans and façades, but also the supervisor, the surveyor of the erection of buildings. So far from such things being derogatory to his art, they are, where not essential, certainly accessory to it. The complete architect will be of necessity at least conversant with them all, though not a specialist in either. He is the organiser of many specialists. Out of many prosaic and material elements his ideal is to produce a unity, a building that "rhymes well": that gives to others some glimpse of the beauty attendant upon perfect order and fitness.

Engineering Laboratory, Oxford University.

THANKS to the influence and financial support of Lord Hythe, the School of Engineering at Oxford University has been in existence for five years, and has quite emerged from the experimental stage. It is now proposed to erect and equip a new engineering laboratory to meet the growing requirements of the School on a site near the north-west gate of the University Park and conveniently near the existing buildings for both engineering and chemistry. Some question has recently been raised as to the propriety of adopting the site mentioned, on the ground that the new laboratory will encroach upon and mutilate the Park. This view is combated by Dr. Warren, the President of Magdalen College, in a letter to the *Times*, where it is pointed out that the ground was originally acquired for the erection of additional buildings needed by the University, and that the proposed site for the engineering laboratory was actually selected by the Curators of the Park themselves. While opposed to the wanton disfigurement of any place, we cannot agree with the proposition that well-designed additions to the architectural beauties of Oxford should be regarded as an eyesore. Moreover, it does not seem unreasonable that Convocation should be asked to permit a comparatively small corner of the Park to be used for a portion of the purpose for which the entire area was originally purchased by the University.

Reinforced Concrete Calculations.

IN his Presidential address to the Concrete Institute, reported in this issue (page 655), Mr. E. P. Wells devoted attention to several points of practical character, quite deserving the attention of architects. On the subject of mathematical computations Mr. Wells emphasised the undesirability of placing too much reliance on highly-refined calculations and the desirability of exercising common sense in connexion with simple formulæ known to give absolutely safe results. There is a good deal to be said for this view, for while the tensile resistance of steel is constant the strength of concrete varies, not only with the human factor, but increases day by day after its deposition, and in some cases becomes very much greater than the value taken as the basis of calculations. Hence all formulæ are rendered empirical, however scientific be their theoretical derivation, while, for the same reason, elaborate calculations afford results that represent nothing more than approximations.



"Halle of John Halle," Salisbury.

From a Sketch by Mr. Leslie Barefoot.

This building, in Canal-street, with its fine timber front, was originally erected as a dwelling by a rich wool merchant about 1470. It was restored in 1834, and is now used as a shop.

National Physical Laboratory.

So valuable is the work conducted at the National Physical Laboratory, from the scientific as well as the commercial point of view, that we sincerely trust a generous response will be made to the appeal issued by Sir William White and Dr. Glazebrook for additional funds. In order to provide for the adequate continuation of work new buildings and equipment are required at the estimated cost of 35,000*l.*, towards which the Treasury are willing to contribute 15,000*l.* Of the balance, 11,710*l.* has been secured mainly through the generosity of the late Sir Julius Wernher, leaving 3,290*l.* to be obtained for buildings in order to comply with the Treasury conditions and 5,000*l.* for scientific equipment. When one looks round the world and finds that in every other country of importance establishments of the same kind are liberally maintained by Government it is indeed humiliating that our National Laboratory should be compelled to make appeals to private generosity.

RICHARD NORMAN SHAW, R.A.

BY PROFESSOR BERESFORD PITE.

To the student they were wonderful days in the early seventies, when Norman Shaw, like a magician, raised the spirit apparition of mediæval semblance in the midst of the most serious endeavours to secure recognition for Gothic architecture as the proper style for the expression of our most modern wants.

Savage had essayed at St. Luke's, Chelsea, to show that for ecclesiastical purposes, and at Westminster Hospital for civil, Gothic excelled Classic in its adaptability, and the incessant teaching of Pugin and Ruskin, as of the works of Scott and Street, argued that Gothic was a living architecture equally quick in a railway-station as in a church, or in a town hall as in a country house, asserting that the modern spirit found a truer note in Christian than in Pagan art.

It may be doubted if Norman Shaw realised more than an artist's irresponsible joy in re-creating the mediæval charm which he attached to each of the series of half-timbered granges and glorified farms that he erected and illustrated. The purpose of applying Gothic details to modern buildings to interpret the XIXth century in the terms of the XVth he frankly abandoned, and by him the charms of mediæval simplicity of aim were simulated in accidental planning, by crude building materials, archaic glazing, and other accessories.

He spirited us away from the present, and we were conducted in an instant into the past. "Dear old England" could indeed be lived in again; "Merrist Wood," "Leyes Wood," and many other country houses up to "Cragside" and "Dawpool," were all realisations of an artist's ideal which the more serious-minded Revival architects had not attempted. The glamour also pervaded the delicious drawings which illustrated the exteriors, set in sweet foregrounds of shrub and rock; the wavy tiles, the plain lattices, and the spotted brickwork entirely harmonised with our patriotic enthusiasm and perfected hopes of domestic architectural happiness. But we knew all along that behind this artistry there had been solemn and steady progress. Shaw had early obtained the Royal Academy Travelling Studentship by a formal Classic design; had published a folio book of correct lithographs of Gothic Continental studies, and had, in a partnership with William Eden Nesfield, produced domestic Gothic designs which were second to none in freshness and

beauty. Was there not, too, during this partnership a perspective published of a competition design for Bradford Exchange in the glorious early Continental Gothic, with a great external frieze drawn by Albert Moore, and, by himself alone later on, a clever church at Lyons, correct and interesting, preceding the more remarkable one at Ilkley by a few years?

In all this he progresses onwards; to march with the rest seemed all that he desired before the veil fell and the phantasy was revealed to him that to be new and modern was behindhand, and to be ancient and mediæval was ideal. Hence the use of apparently decaying laths curving the lines of the tile-courses, the dotted brickwork, accidentally obscured windows, crooked passages, and sudden levels.

Still, the master was sanely up to date; the plans worked amazingly, the construction was alternately excessively ingenious and simply natural; an artistic craftiness of scheme was associated with the picturesque exterior that made both elevation and plan amazingly consequent and fascinating; and, though the whole was mediæval, it was alive.

Norman Shaw's work could well have concluded the History of the Gothic Revival and left his name among its great ones, but he was then only in his early prime, and the spirit that worked within him was quicker than the content of that movement. Whether New Zealand Chambers will remain for Macaulay's antipodean visitor's residence when his time comes we cannot say, as that depends upon the endurance of its concealed construction; but the triumphant bursting of the bonds of the old Metropolitan Building Act was achieved in that *tour de force*, not of Gothic art, but of modern antiquarian craftsmanship of design. That purity of style and avoidance of debasing Renaissance infection, which were the sheet-anchors of Revival virtue, were abandoned, and something that might, in the picturesque symbolism of the jargon of the school, have been called licentiousness was publicly invoked. The Gothic game was up with Norman Shaw, and he applied the freedom and adaptability of all the architectural experiments and ignorancies of the early undeveloped and unscientific English Renaissance to modern building. The saving element, as before, lies in the exquisite humour of the artistic appeal to picturesque sentiment alone. The "Swan House," the "Clock House," and others on the Chelsea Embankment violate many constructional proprieties, though they remain standing; but "Lowther Lodge," Barings' Bank, and other solemn examples in Queen's Gate, from north to south, gradually accept simpler forms of constructive appearance—that is to say, they avoid puzzles, and charm the world by their breadth and simplicity.

During this period Norman Shaw created a school of modern domestic building which became wide enough to be national. He led the way from the Middle Ages through the early to the later Renaissance, compelling modern requirements as he went along to conform to ancient appearances. Time loves change and movement, and he changed and moved, but always in front. No architect led him. He had affinities and sympathies with the leaders in every branch of decorative art, but none could equal his full stride, even when he seemed to slow down into beautifully commonplace building. The smaller houses at Bedford Park and Melbury-road, as well as the larger ones in Hampstead and on the Cadogan Estate, can all be discerned as his by the excellence of their simple qualities.

New Scotland Yard may well be said to stand by itself. Entirely fresh, and unjustified by precedent among official buildings, it is as rightly architectural in scheme as the Houses of Parliament or St. Thomas's Hospital, but is much more satisfactory upon its riparian site, and increasingly impressive as the fashion of its style passes into the architectural history. One feels that it is independent in its solid qualities of the accident that it seemed artistic to the men who first liked it.

Then the latest phase of pompous Renaissance dignity and richness of line—"Bryanstone" in the country and the "Gaiety" group in town, followed by the great Quadrant scheme and the Piccadilly Hotel. In old age he was as great in surprises as in his youth. There seemed to be hardly any architectural sensations to which Norman Shaw could not give effect in plan, elevation, grouping, or detail. Each phase found its master in his hand and was brought into service.

It is yet soon to estimate the permanent value of Norman Shaw's work; it may be that the relation of his designs to the current from which they emerged may be forgotten, the charm of his published drawings may remain only with collectors, the fragrance of his genial humour, only partially embodied in much interesting and characteristically prolific correspondence, may evaporate with the passing of a generation, but New Scotland Yard, at least, must remain awhile, midway between Westminster and Somerset House, seated upon the Embankment in monumental dignity as a fair embodiment of a man and a movement which cannot be overlooked in any distant survey of English architecture of the latter half of the XIXth century.

THE PRIORY CHURCH, CHRISTCHURCH.

THE Secretary to the Society for the Protection of Ancient Buildings wrote to the *Times* of November 21 with reference to the restoration of this church. Mr. T. G. Jackson, R.A., has given us special permission, with the concurrence of the Bishop of Winchester, to publish his statement in reply to the charge of vandalism. The words of the original note are printed in parenthesis in small type, and Mr. Jackson's comments follow in each case.

(1) "The great mediæval church of Christchurch, Hampshire, is well known, and any damage done thereto must be considered little short of a national calamity. A faculty from the Bishop of Winchester, dated March 9, 1912, gave power to the Vicar and Churchwardens to carry out certain well-defined alterations to the internal fittings of the church. In his printed appeals the Vicar stated:—'There will be no destruction of ancient work,' and 'no ancient work will be interfered with.' In spite of such assurances, and under cover of the Bishop's faculty, which gave no consent for it, much ancient work has been interfered with in a disastrous and unnecessary manner. The north transept has been much pulled about, a great quantity of new stone has been inserted in the west wall, to the destruction of original Norman work."

The work in the north transept consists in removing a modern gallery which was never used and the stairs that led to it, also the removal of some pews with glass screens that blocked the beautiful arches of the two eastern chantries, also the removal of the modern deal pews below the gallery and the repair of the floor which had been broken up for the flooring to these modern pews. New floors have been laid, and the transept is seated with oak. The effect of this has been to restore to the interior view of the church the north transept, which was completely blocked up with high pews and galleries, and to expose the two chantries, which are now accessible from the transept.

(2) "Portions of arcading that remained in that wall have been 'restored,' and Norman shafts from elsewhere have been mutilated and inserted."

The arcade is not restored, but the missing colonettes have been replaced. The whole of this arcading was mutilated to make way for the modern deal pews. I directed the replacing of the colonettes with new stone. But the foreman, without my knowledge, used some old shafts, once apparently outside the church, which were found lying in the crypt. This I should *not* have allowed, and I suggested their removal, but the Vicar thought this unnecessary under the circumstances.

(3) "On the eastern side of the transept a new stone wall has been built, blocking up the stairway leading to the eastern chapel from the north chancel aisle."

This wall formerly existed, and half of it is old work. It was continued on the old lines in order to enclose the transept from the eastern part of the church and support the glass screen which the Vicar and Churchwardens consider necessary to exclude draughts.

(4) "New stairs have been inserted below the southern arch opening, from the said chapel to the transept."

The original levels of the transept and the chantries being preserved, steps were, of course, necessary. Before the present work there were deal steps forming part of the pewing that has been removed. The new steps are of stone.

(5) "The Norman arch leading from the transept to the north chancel aisle—one of the few vestiges left of the Norman choir—has been much tampered with, its northern side having been, without any necessity, practically refaced with new stone, and the plaster and original stonework destroyed."

This was a more serious matter. It is untrue that the *arch* has been "much tampered with." It has not been touched at all. The pier next the chantry on which it rests was badly crushed and split and had been cut into by the beams of the gallery. It was in a very dangerous state, and gave me great concern. It has now been mended with new bonding stones where the old stone was crushed, and has been grouted with cement and, I believe, made secure. This was a very difficult and delicate operation.

(6) "The opportunity of resetting the encaustic tile pavement of the north transept (recently discovered) has been neglected and many of the fragments removed to the vicarage or left on rubbish heaps."

My instructions have been that every fragment of the old tiling which was discovered on the removal of the deal floor should be relaid in the original place. The tiles are sadly broken and most of them imperfect, but enough remains to be of great interest. Mr. West, the Curate, is taking careful drawings of them.

(7) "These are but a few examples of the damage wrought in the last few months, and many examples in the last few years might easily be cited. Work on the church is still proceeding. . . These vandalisms (quite apart from the damage done to a glorious national monument) call for the strongest public condemnation, and yet the Bishop of Winchester is proposing to visit Christchurch on the 29th inst. to give his official benediction to the work."

What the examples which are *not* cited may be we are left to imagine. All the work I have done hitherto has been of the nature of structural repair. The timber roof which exists above the plaster groining of the nave—an interesting structure of the XIVth century—has been secured instead of being removed, as had formerly been proposed. The tower, of which the parapets were insecure, has been repaired and the masonry cleaned from plants which has done serious damage, the facing stone being in some cases forced more than an inch out of the wall. The south wall of the nave which had given way has been underpinned, and a drain is formed. The slating of the roof has been put to rights. The groining of the Lady Chapel had suffered by the expansion of the iron bars and cramps with which it had been put together and the springing stones of several of the bays, especially that

at the west end, were split: and their condition was such that they might have slipped and brought the whole vault to ruin. They have been very carefully repaired by inserting new springers in the place of those that were burst, and the ceiling has been thoroughly repaired where necessary elsewhere.

(6) "Besides the foregoing, a scheme may soon be on foot to 'restore' the Lady Chapel by means of a large sum of money left for the purpose by one whose connexion with Christchurch was of the slightest. It is no exaggeration to say that in the case of a building like Christchurch its value decreases whenever money is spent upon it for purposes other than necessary repair. Here, nevertheless, is a scheme involving the expenditure of thousands of pounds on restoration which will do little but depreciate its value as a national monument. Surely it is time that the nation obtained proper protection for its treasures and antiquities."

Of this last matter I know nothing.

It seems to me that the objections made in the foregoing extracts are captious and unreasonable. They are taken almost verbatim from a letter sent me some time ago by a gentleman who lives at Christchurch. . . . I am not aware that the Society for the Protection of Ancient Buildings has visited the work or done more than adopt this letter. . . . The repair of the reredos, which was in a dangerous state, has now been secured according to my plan, which was approved by the Society of Antiquaries.

(Signed) T. G. JACKSON.

THE ROYAL SOCIETY OF PAINTERS IN WATER-COLOURS.

THE winter exhibition of the Royal Society of Painters in Water-Colours provides a gay and fanciful array of pictures, a pleasant medley of patterns, if it contains little of more than average interest and skill. Much of the work suggests the rapidity of execution which is more or less essential in the material, and much of it also rapidity of observation, which is not perhaps the same thing as depth of observation. In the landscapes, for instance, of David Cox we may find the first two qualities, but in them we also find the third quality. When we begin to disengage the work of particular artists from the general mass of painting on the walls we find that many of the artists—Mr. Charles Sims and Mr. Napier Hemy, for instance—are successful in obtaining precisely the same effect which their work in oils has made familiar. Mr. Sims's formula, which aims at the expression of light poetic fantasies, would seem perhaps to lend itself more particularly to the purposes of the lighter medium. But, whatever the medium, we are grateful for the expression of the pliant, decorative, imaginative outlook of this artist in modern painting. Mr. Napier Hemy's sea-pieces are faithful transcripts, in which are caught the spirit and swiftness of the current and the breeze. Mr. Robert W. Allen, on the other hand, readily adapts his point of view to the water-colour touch in the numerous bright examples which he has contributed to the exhibition. The art of Mr. Clausen stands a little apart. He is more subjective than the other painters. Direct transcripts or formulæ in fantasy are not in his way. He certainly does not take any interest in the photographic resemblance of things. His drawing, for instance, of the "West Door of the Parthenon from Within, by Moonlight," may not be a good architectural drawing, but it is no calumny on architectural form as are so many painters' drawings which attempt to depict architecture more precisely. The art of Mr. Clausen is, in any case, that of temperament not that of the camera. Take again his strong, rugged sketch of Ludlow Castle, in which the aspect of the building and the aspect of Nature take on a wind-swept and weather-beaten garb—an obviously sentimental view, you may say; and so it is in a way, but the artist's feeling for style, his personal vocabulary in colour, are not those of the cheap sentimentalist. Mr. Walter Bayes is what one may call a quiet painter; he makes no charge on your emotions, you leave him with a certain impression of delicacy and charm but a little cold, with an impression of artistic theory rather than of artistic vision and impulse. He is a painter, as you might say So-and-so is a grammarian; that is, he understands the syntax of his art. But he is more than that, and in his two pictures at this exhibition, as in those which we have seen elsewhere, we feel that there is in his work a good deal of artistic vision, of an unaccommodating kind, as well as esoteric artistic theory. So far as architecture is concerned there is much of interest, including a large and outstanding view of the south-east angle of Ely Cathedral (painted for the Municipal Art Gallery at Birmingham), by Mr. Rooke, and numerous subjects by other artists from scenes in Italy. Mr. Reginald Barratt shows various pictures associated with the Piazza and St. Mark's at Venice; but in none is he so successful as in his delineation of the decorative detail of the base of the great flagstaffs which face the cathedral, the best drawings, from this point of view, at the exhibition. Mr. Walter Crane shows the spectacle of an aviation meeting drawn after the somewhat quaint precision of the earlier manner of Mr. Walter Greaves, while the strength and lucidity of Mrs. Laura Knight's art are well represented in "By the Sea," in which human sentiment and the sentiment of Nature are brought into some kind of relation.

THE KENSINGTON FIRE.

IT would not be fair to those most concerned to say that the lessons of the Clapham Junction fire and other disastrous fires in drapery establishments have been neglected. Nevertheless, they have not been properly learnt—a point which is sufficiently illustrated by the facts brought out in evidence given at the Coroner's inquest on the recent fire in the premises of Messrs. John Barker & Co. at Kensington.

Like other large drapery establishments that have not yet been rebuilt in consequence of fire, the buildings occupied by the firm were not in conformity with the present state of the law as set forth in the London Building Acts, and were not suitable for the conduct of a business characterised as dangerous by the Coroner who inquired into the Clapham Junction fire. The proprietors had evidently recognised the necessity of providing safeguards, for they had installed four means of escape from the upper floors in the form of a staircase, two iron ladders, and a rope ladder; and, as one witness stated, the place was "overrun with fire appliances." We must point out, however, that even the most lavish expenditure in this direction is absolutely futile unless expert advice is obtained for guidance in the selection and installation of safety appliances.

It is satisfactory in a measure to learn from the evidence of at least three witnesses that loss of life might have been avoided if the girls who perished had retained their presence of mind. But this would have been due to the gallant efforts of the London Fire Brigade, and not to the means of escape provided by the firm. For instance, we learn from the evidence of the head fireman to Messrs. Barker & Co. that "the box containing the rope ladder was burned, and the ladder had dropped down, so that it was never used," and from the evidence of Mr. Chatfeild Clarke, F.R.I.B.A., that the escape appliances were mostly on one side while the fire attacked the premises from the other side. Again, it is made clear by the evidence that the numerous fire appliances did not include automatic alarms or automatic sprinklers, both of which are of inestimable value in the early stages of fire. We thoroughly endorse the recommendation of the Coroner's jury that buildings of the class in question should be fitted with automatic fire-alarms, and regret that automatic sprinklers were not included, for these begin to operate at once and long before aid summoned by alarms can arrive on the scene.

The fire appears to have started in the kitchen, where a boiler fire had been banked up for the night. In itself this should have occasioned no risk; but from the evidence of Mr. Dyer, London Fire Brigade, we find that the flue passing from the boiler up through the roof was lined with wood at the top—an arrangement once more demonstrating the point that the lavish provision of fire appliances is not sufficient, and that proper advice is necessary as to the safety of fittings and apparatus throughout the building to be protected. Compliance with the principles of fire-resisting construction as embodied in the London Building Acts is certainly not less important than the supply of fire appliances, but we may suppose that the directors of Messrs. Barker & Co. believed so strongly in the efficacy of the latter that they did not hesitate to continue the use of the upper story as sleeping quarters for some of their staff, and for the same reason delayed attention to the structural alterations proposed by the London County Council.

Events have proved that the firm were not justified in either course of action. Both Colonel Fox, London Salvage Corps, and Mr. Hanson, District Surveyor, expressed the opinion that it was unsafe for people to sleep in the building, and Mr. W. E. Riley, London County Council, said that if the suggested alterations had been made at the time of the fire, the inmates would have been able to escape. He also stated that an immense number of similarly dangerous buildings have to be dealt with in London, and we gather from his evidence and that of Mr. Milborne, a director of Messrs. Barker & Co., that the County Council are not taking very peremptory action to ensure prompt compliance with the law.

It is quite easy to realise that business firms may wish for time to consider extensive alterations involving heavy outlay, and to appreciate the considerate motives influencing the officials of the County Council. But it is equally manifest that persons engaged in dangerous trades must be awakened to a sense of their responsibilities, and, if necessary, compelled to give prompt attention to statutory obligations.

On this aspect of the question we may refer to the letter from Mr. E. O. Sachs, printed elsewhere in our present issue and also in the *Times* of Tuesday last. It will be seen that Mr. Sachs is strongly impressed with what he considers to be the apathy of the London County Council in enforcing the provision of the London Building Acts relative to fire protection.

We can quite understand the anxiety displayed by our correspondent, and agree with him that it is very desirable that the provisions of the Acts as amended in 1905 should be applied to all buildings coming within their purview, with a minimum amount of delay. At the same time, it must be admitted that the task placed on the shoulders of the County Council is one of enormous magnitude—a point made clear by the letter printed in the *Times* of Wednesday from Mr. A. T. Taylor, Chairman of the Building Acts Committee.

Although thousands of cases have been dealt with since the Act was passed in 1905, it is admittedly the fact that many thousands remain for attention, the policy of the County Council, as outlined by Mr. Taylor, being to deal with dangerous cases as they become known, and the remainder by a gradual process, so as to avoid a general

structural disturbance throughout the whole of the metropolis.

At the same time, it is manifest from Mr. Taylor's letter and the evidence of Mr. Riley that the County Council are unable to put administrative machinery into operation for the purpose of enforcing immediate compliance with the comprehensive requirements of the new Act all over London, and that the completion of the work, so far as concerns existing buildings, will probably occupy a long period of time. Therefore, without in the slightest degree implying any reflection upon the Building Acts Committee or the Architect's Department of the London County Council, we are unable to regard the situation with entire complacency, and trust that prompt measures will be taken to deal with dangerous cases, particularly where the premises are occupied in part for dwelling or sleeping purposes.

AN ordinary general meeting of the Architectural Association was held on Monday at the Rooms of the Association, Tufton-street, under the Chairmanship of Mr. Gerald Horsley (President).

The Secretary announced that the Athletic Club dance would be held on December 2 from 9 till 2.30 at the Wharncliffe Rooms of the Hotel Great Central, and that tickets could be obtained at the office, price 8s. 6d. each.

The following new members were elected:—Mr. S. G. A. Cockle, Dovercourt; Mr. G. N. Mackenzie, Westminster; and Mr. R. M. H. Philp.

The President called attention to the very interesting exhibition of sketches, plans, etc., of London districts on the walls of the room which, he said, would repay study; and also to the exhibition of the works done in the Schools during the past term in the gallery, which, he said, gave an excellent idea of the work being done.

The Late Mr. Norman Shaw.

The President said it was his melancholy duty to refer to an event which was profoundly affecting them at the present time—he meant the great loss which all architects had sustained in the death of Mr. Norman Shaw. Mr. Norman Shaw was one of their Vice-Presidents about 1857. It was impossible for him to say how much they were indebted to Mr. Shaw, whose influence on architecture had been profound. Modern architecture, as they knew it to-day, was really due to Mr. Norman Shaw's creative influence. Supported as he was by other men of his time, who recognised his great genius and ability, he had taken the lead in the direction in which their architecture had been progressing in the last few years. He moved that a vote of condolence be sent to the relatives of the deceased gentleman.

The motion was carried in silence.

The Late Mr. I'Anson.

The President said he had also to ask them to pass a vote of condolence to the relatives of the late Mr. E. B. I'Anson, who had been a member of the Association for many years, and whose work in the City of London and other places was well known to most of them. He was a man who was universally respected by all who knew him.

THE PROSAIC IN AN ARCHITECT'S WORK.

Mr. Horace Cubitt then read the following paper:—

"It will, of course, be admitted that an architect should be competent in all branches of his work. To such end we have now a most elaborate system of architectural education, and, apart from this, we are all, in some measure, students to the close of our days. But there is a tendency for study to be very largely confined to subjects which readily appeal to the imagination, and in consequence other subjects of less interest, but of very great importance in the work of an architect, tend to be rather neglected.

The statement that an architect should know his work must not, however, be construed to mean that every architect must be competent in regard to all classes of work that architects undertake to do. There are many branches of work occasionally carried out by architects which are not, in the correct sense of the term, architectural work. There is, for example, the valuation of property. It will surely be admitted that, although a scale of fees for this work is quoted in the Institute's Schedule of Professional Charges, a member of our profession when engaged in valuing property is acting not as an architect, but as a surveyor. The same applies also to the work of preparing quantities. An architect when executing such work is surely, for the time being, a surveyor. Other important instances where work frequently undertaken by an architect is in reality that of a surveyor are the measurement of the area of a building site or building estate, and the settlement of dilapidations. No suggestion is made that an architect should not be conversant with many subjects which come within the term "surveying." It will often be very helpful to him in his practice if he is able to undertake work of this nature, although in the larger towns he will do well to leave such subjects as the valuation of property and the preparation of building quantities to surveyors who specialise in these subjects. But such knowledge is in no way essential, whereas it is obviously of primary importance that an architect should be thoroughly acquainted with the carrying out of all matters that correctly come within the scope of the term "an architect's work."

True Architectural Work.

It may be said that it is difficult to know where to draw the line between true architectural work and surveying work that is undertaken by architects. But there is really no difficulty at all. An architect, as the designer of building work, should obviously be acquainted with all branches of knowledge that affect the work of design—using the word design in the correct sense of the word, and not restricting it as is so often done to the conception and elaboration of ornamental features. Beyond this his knowledge need not extend. It will be seen that ignorance of the various branches of work already mentioned will not handicap in the slightest the designer of building work. With valuations and dilapidations he is clearly not concerned, and his design will probably gain rather than suffer in execution, if the survey of the site and the preparation of the quantities are undertaken by some other person.

But an analysis of the process by which a design is evolved will show that there are other branches of work of very great importance to the designer, which are frequently incorrectly classed as belonging not to architecture, but to surveying or engineering. These branches of work, which cannot usually be mastered without considerable application and study, do not appeal to the majority of architects and architectural students. Hence, the wish and the thought being in the proverbial relationship, there is a tendency to regard a knowledge of such subjects as not essential to the equipment of an architect. Why, it is in effect said, should we waste on these prosaic subjects valuable time which might be better spent in gaining a fuller knowledge of art? But can this attitude be justified? A designer when called upon to deal with an architectural problem is surely required to have a knowledge not merely of proportion, architectural detail, and the customary methods of construction, but of all the practical requirements, restrictions, and possibilities that affect the work on which he is engaged. The evolution of a design is such an intangible process of catching up, weaving together, and elaborating ideas that arise in the brain that the designer can work freely and satisfactorily only if he has a thorough grasp of everything that materially affects his work. But, it may be said, this is expecting too much of the designer; surely it will be permissible for him to get the opinions of specialists on certain points, and then, if necessary, modify his design accordingly. Imagine a composer of organ music being compelled towards the end of his composition to call in various specialists in organ construction with a view to modifying his score where, as written, his advisers considered it unplayable. Or imagine such a man producing a moderate work instead of a possible much finer one, because of his lack of knowledge of the capabilities of his instrument. An architect who in matters vitally affecting his design relies on the advice of specialists instead of making himself conversant with all the subjects concerned is acting in a somewhat similar manner, and runs a similar risk.

The Building Law.

Let us consider the chief of these subjects that are thought by many to be too unimportant and too prosaic to be worth the close and thorough attention of the exponents and students of architecture. Take, for example, the comprehensive requirements of the building law in our larger towns, and more particularly in London. Here we have an elaborate code which very materially affects the erection of every building. Consider an ordinary domestic building on an ordinary site, and it will be found that the position, height, and construction of the building will be very materially controlled by the requirements of the building law or by-laws. The building, for instance, must not extend beyond the frontage line; it must have the requisite amount of air space at the rear; it must not, if situated in London, extend above the diagonal line; its walls must be of specified materials of specified thickness; its system of sanitation must be designed and constructed throughout in accordance with specified rules. All these points are met with in the design and construction of a building of ordinary everyday class. In dealing with special buildings further requirements are encountered. Large public buildings, for instance, are required to be planned so as to afford reasonable means of escape in case of fire, and to be of fire-resisting construction. In London the means of escape requirements apply to a very large class of buildings, and there are also special constructional requirements affecting warehouses, shops with dwelling-rooms above, tenement buildings, etc.

These numerous and far-reaching requirements have a very considerable influence on the buildings that we design. Possibly some of such requirements are open to criticism. If so, by all means let us have ample criticism, and, if it is found to be justified, let us get the offending requirements either rescinded or amended. But the bulk of the requirements will doubtless withstand the fire of criticism, and in any case we are bound to conform to all requirements existing at the moment, whether good or bad. Seeing that this is so, surely it is not unreasonable to suggest that it is the business of every architect to have a good working knowledge of the requirements in the district in which he practises. But what percentage of London architects are well acquainted with the London building law?

It is becoming to be a generally accepted axiom by modern writers on architecture that the study of any style is of value in direct proportion to the pains taken to understand the spirit of which the architectural forms are the outcome. A consideration of Greek architecture will show a thorough appreciation of just limitations to have been one of the predominant characteristics of Greek designers. It may seem rather venturesome to suggest that the modern exponents of the

Neo-Grec should, as one of the principal bases of their work, take to a study of the building law. Yet I cannot imagine a Greek architect commencing to design a building while having but a hazy idea of the requirements governing his work. In fact, a Greek architect with hazy ideas on any branch of his work is almost inconceivable. The clear-cut intellectuality of his age could not brook the kind of half-knowledge which to-day is so prevalent.

Result of Ignorance of Requirements.

But it will doubtless be said—remarks to this effect are of everyday occurrence—that it is impossible for the average architect to become familiar with requirements so comprehensive in character as those applying in London, and that, after all, there is no real need for the architect to bother his head too much about such matters; if he goes wrong the District Surveyor or the London County Council officials will soon put him right. In regard to the first of these two assertions, it must, of course, be admitted that a detailed knowledge of every single requirement is out of the question. Neither is such knowledge necessary to any person; for the details of any requirement every careful person will consult the exact text of the Act or by-law in question. But a general knowledge of the requirements is a very desirable acquisition, and is not a matter of very great difficulty. But close attention and study is, of course, required; it is not possible to become well grounded in any subject without concentration, and the London Building Acts cannot be mastered in a spirit of absent-mindedness.

As regard the assertion that the administrative officials will prevent the architect from contravening any requirements, this as a simple statement may be accepted at once. But as for the implied suggestion that their action will operate favourably rather than otherwise in regard to the building in question, such a desirable result will not occur in one case out of twenty. What most frequently happens is that the architect who is not well acquainted with the building requirements evolves his design without much regard to such requirements. When he has succeeded in obtaining a satisfactory design from his client's standpoint, and there are immediate prospects of the building work being commenced, he submits his plans to the local surveyor. If he is lucky perhaps only a few small modifications will be necessitated. But not unfrequently he has the mortification to find that his building as planned contravenes a very important requirement—it extends in front of the general building line, or it has not the requisite open space at the rear, or the means of escape in case of fire are inadequate, or in some other important respects it is contrary to the building requirements. What is to be done? The client is impatient to get the building started. The architect has not the heart to spend a great deal of time in reconsidering his planning in the light of his new and dearly-bought experience. The local surveyor is principally concerned in obtaining a compliance with the requirements. If this can be done without impairing the efficiency of the building he is admittedly pleased, but if it cannot he philosophically and rightly reflects that it is not his fault. All things tend to what in many cases is practically the inevitable. The pruning-knife is requisitioned. The design is ruthlessly lopped and carved here and there to make it conform to the requirements. The architect henceforth is convinced that all by-laws and building requirements are made solely for the exasperation of the profession. It never enters his mind that he is to blame for not having made himself acquainted with the requirements affecting his work.

Law as to Rights of Light.

The mention of the procedure of cutting back a building brings us rather naturally to the subject of the law regarding rights of light. This, like the building law, is often considered to belong rather to the domain of the surveyor than that of the architect. But the great effect which this branch of the law has on the erection of buildings surely places it among the most important practical branches of an architect's study. Thousands of buildings are erected every year of which the heights, and thus to some extent the character of the elevations, are governed by the rights of light of neighbouring buildings. Architects should surely know to what extent they are able to build when concerned with a site thus subject to serious restrictions. Although the cases decided by the Courts are legion, yet, thanks to the decision of the House of Lords in the often-quoted case of Colls *v.* Home and Colonial Stores, the law on the subject is not unduly complex, and is within the understanding of any person who cares to give a little time to the study of it. An architect ought to have a reasonable acquaintance with the law on this subject, so that he can tell whether he is keeping within safe limits or whether the building that he proposes to erect is one of those on the borderline between what is and is not permissible. In dealing with a site subjected to rights of light it will often be necessary to make the maximum permissible use of the site, a borderline case being in such instance the obvious primary objective of the architect. Then, in the subsequent negotiations with representatives of the dominant neighbouring owner or owners he can feel his way, and, if necessary, make some little concessions in order to dispose of any opposition that may be encountered. In matters of this kind an architect will surely produce a better building if he has a sufficient knowledge of the subject to enable him to act independently, and is not compelled at every stage to go to an expert for guidance.

Law of Contracts.

A great deal of attention has recently been given by the profession to the law of contracts as affecting architects. It is undoubtedly a very important subject, although from the standpoint of architecture it may be considered to be of less vital interest than the subjects of the building law and the law as to the rights of light. For it is quite conceivable that an architect might erect a succession of fine buildings under forms of contract of hopelessly unsuitable and inadequate character. Or an architect might possibly delegate the whole of his work of this nature to his solicitor, and his buildings might be none the worse. But it is obviously not to the interests of the profession, and thus indirectly not to the interests of architecture, for architects to gain a reputation for lack of business ability; neither is it desirable to allow any of our legitimate work to fall into the hands of lawyers. The law of contracts as affecting both the building owner and contractor, and the architect and client, is therefore a necessary subject of study for practising architects and for aspirants to the profession. There is also one special aspect of the study of various legal branches of our work which should not be overlooked. Familiarity with the interpretation of the law as expressed in the judgments of the Courts tends to produce an appreciation of the just value of words. In the majority of building cases, except to some extent those regarding rights of light, the decision depends almost entirely on the construction of a clause in a statutory requirement or contract, or in the interpretation of a judgment in a previous case. It is impossible for a person to give much attention to legal decisions without acquiring, unconsciously perhaps, a clearer form of literary expression. The value of this is, of course, considerable, having regard to the amount of correspondence which an architect's practice necessarily entails. Also it may be not unfairly contended that the habits of precision thus established are no inconsiderable asset in the practice of what has been termed the most sane of all the arts.

Construction.

We now come to the question of construction. As regards those branches of the subject which are embraced within the work of the main building trades, the modern architect has generally a very sound knowledge. Indeed, in the case of brickwork, carpentry, and joinery it is not too much to say that many architects know much more of the technique of these subjects than the average mechanic. And that this is so is one of the hopeful signs in modern architecture. But how about the important matters in the erection of a large building which it is the custom to include in the general term "engineering"? Here it is quite the exception to find that the architect is sufficiently familiar with the work to be able to design and control it in all details. He usually is compelled to place such work, and thus to some extent his own reputation, in the hands of specialists. To a certain degree this action is justifiable. So many special matters are encountered in the construction of most large modern buildings that it is quite impossible for an architect of other than most exceptional attainments to be thoroughly well acquainted with them all. There is, however, a distinct line beyond which an architect ought not to go in delegating his work to specialists. If the special work is such that it can have no material influence on the general design and construction of the building, the specialist may be employed. Such matters as the technical details of electric lighting and hot-water heating of ordinary buildings may not unreasonably be delegated to specialists, for if this is done the resulting work will often gain by the arrangement. But, on the other hand, if the work is such that it affects the design of the building, the architect cannot rightly delegate it to anyone.

Structural Design.

There is one subject of vital importance in architectural work which comes within the latter category. This is the subject of structural design, within which may be included at one extreme the formation of the simplest type of cottage roof, and at the other such undertakings as the conception and elaboration of a dome like that of St. Paul's or a bridge like Waterloo Bridge. Most modern architects are exceedingly inconsistent in their treatment of this subject. So long as the problems to be solved are of a similar character to those which have been dealt with by members of his profession for centuries past, the average architect has no hesitation in applying his mind to them; but, given problems of a new character, and the use of new materials, he at once says, "These questions are beyond my ability and experience; I must call in the engineer." As a result, the services of the architect are often dispensed with entirely, or, when he is employed, we obtain structures that are the design of two persons working from entirely different standpoints. If, as usually happens in the case of a bridge, the engineer is responsible for the initial scheme, the work of the architect, if he is not ignored altogether, is restricted to the application of ornamental features—or features that are intended to be so—to the engineer's design. The thought that the chief beauty of a bridge is in its general lines rarely appears to occur to either party. On the other hand, in the case of a large structural feature of a building, the architect first evolves the design, paying principal attention to the question of appearance. When complete, he turns it over to the engineer with a request that he shall settle, in all details, the form of the construction. Perhaps a few hours afterwards the same architect solemnly and —absurd as it may seem—in all honesty holds forth to students on the well-worn text that construction is the basis of all true design.

The reason for this failure on our part to place on a truer basis the more advanced branches of modern architectural design is undoubtedly a strongly-rooted dislike of the study of the—to most architects—uncongenial subject of structural design.

Teaching in Architectural Schools.

It will be of interest to take note of the attention which is given in the several architectural colleges and schools to the subjects dealt with in this paper. The subjects of the building law, the law as to light and air, and the law of contracts are usually classed with a few other branches of work under the heading of professional practice. Outside London it appears, from such information as is available, that practically no instruction is given in these subjects in architectural schools. In most London schools a certain amount of attention is given to the building law, but apparently it is only in the Architectural Association schools that a general course of lectures on professional practice is given. Having regard to this, it may seem rather uncharitable to adopt a critical attitude, but criticism cannot be disarmed by the mere provision of a course of instruction, without reference to the value of the course. A policy of declining to teach certain subjects is perhaps more capable of

defence than one of arranging a course, which, on the face of it, is too short to enable the subjects to be taught properly. The policy of reserving these lectures to the student's fourth year is also open to criticism. By the establishment of the course it is presumably conceded that the subjects included are ones of which an architect should have some knowledge. But under the present arrangement a student completes three years' training before he is officially informed that such subjects exist. Proper knowledge of any subject can only be obtained gradually; years rather than months are usually required. It therefore seems to be more than probable that the value of a course of lectures on professional practice, delivered to students towards the end of their training, would be greatly increased if students in their first year were brought in some way into touch with the elements of this important part of an architect's work. Doubtless this criticism can be met with the retort that during a period limited to four years it is impossible to teach everything. The problem of the training of the embryo architect is certainly a difficult one, and it must be admitted that A.A. Schools afford about the most level-headed architectural education that is given anywhere.

Unity in Architectural Studies.

In most architectural schools throughout the country the subject of structural design is in part taught under such titles as "mechanics of structures," "theoretical construction," "graphic statics," etc. But the teaching is usually confined to the dry-as-dust methematical side of the subject. Other classes are held in which is taught the science of ordinary building construction, and there are, of course, yet other classes in what is termed "architectural design" where the treatment, however, is usually restricted to questions of planning and to the design of elevations on approved historic lines. One feels compelled to ask why it is not possible to teach the subject of architecture by dealing with a building from all standpoints—the planning, the construction as determined by mathematical calculations and ordinary practice, and the treatment of the constructional features in such a manner as to produce real and virile architecture. There are certain cases where we are instructed not to let the right hand know what the left hand does, but there is no authority for applying this precept to architectural education.

It is hoped that sufficient reasons have been produced to justify the statement that the various subjects in our work, which are usually stigmatised as dull and uninteresting, are nevertheless of very considerable importance. If this is so, it surely follows that they should be given a place in the forefront of an architect's studies. In no art, profession, or business is it contended that if certain studies are uninteresting they should therefore be neglected. In any case, if the established members of our profession demur at pursuing these studies themselves, they may not be unwilling to see them made compulsory in the case of students. This would afford still further grounds for the older men to expatiate on the increased educational advantages under which the present generation of students pursue their studies.

Repudiation of Title of Paper.

The time has now come when the title of this paper may be thrown overboard. These subjects as a whole are not prosaic. Of course, a good deal depends on the general outlook of the individual. There are persons —you find them principally on the Practice Committee of the Institute—who look upon the law of contracts as a highly enthralling subject. Up to the present I have not been touched with this enthusiasm. The building law, however, exercises a certain attraction. In studying the details of this subject there is always the zest of exploration. New uncertainties are always inviting investigation. The modern geographical explorer is beginning to have rather a bad outlook. Before very long the world will be so well explored that there will be nothing fresh for him to discover. But the person who takes as a field of exploration such a subject as the London building law need have no fears in this direction. As soon as he becomes reasonably familiar with the various by-paths he will find that the County Council have amended the law and there are fresh points for him to investigate. The subject of rights of light is by no means uninteresting, and should appeal to two distinct classes of architects. Those who like a battle of wits will find ample opportunities for a display of their abilities in the negotiations which are so often involved. Those who are interested in such subjects as geometry and optics may usefully devote time to the study of the effect of obstructions on the varying degrees of light received by ordinary buildings in thickly-populated districts.

That the subject of structural design can possibly be considered prosaic is a most serious reflection on our modern method of training. The Roman architects and engineers who erected the mighty thermæ, aqueducts, bridges, and amphitheatres, which are still the wonder of the world, obviously did not consider the subject of structural design dull and uninteresting. The Gothic builders, it may be assumed, took as keen a delight in the logical scientific construction of their buildings as they did in the execution of the mouldings and carving with which such construction was embellished. Coming nearer to our own time, it is only reasonable to suppose that the "great mathematician" expended as much thought and labour on the fine structural scheme for the dome of St. Paul's as he did on the design of any other feature in the building. It is necessary for us to realise that structural design is not a mere matter of calculations and formulæ. These things, however necessary they may be, are but means to an end, such end the achievement of a living architecture, founded, as was the case with all the historic styles, on the basis of logical construction."

Mr. Max Clarke,
in proposing a vote of thanks to the author, hoped that more opportunity would be given to the junior members to speak by allowing them to propose such resolutions, as it was well for them to make a commencement in a place where they were more or less at home. Mr. Cubitt had had the audacity to come and tell them they were not conducting their business in a proper manner, but whether he was right or not was a matter of opinion. When they had a paper of that kind the hall was not half filled, whereas on other occasions when the subject of discussion was supposed to be of more interest it was crowded. This was exactly what Mr. Cubitt had been telling them, viz., that these matters which he was pleased to call prosaic did not appeal to the younger generation, or perhaps also to the older. If he had his way he would never deal with a light and air case or make a survey of a property or a schedule of dilapidations, but he had to live by architecture, as he expected others in the room would have to, and if a young man sat in his office and declined the chance of doing these things when a client came along he would lose that client for ever. He disagreed with the author in several details. He believed one of the first things a man should learn was how to measure a piece of ground and also how to be able to take the levels of the ground. The practice of architecture was very much in the clouds. They were all hoping for the chance of building a palace, but very likely it would result in their getting a cottage to build, and probably they would be faced with the difficulty of having to build it for 150*l*. If the architect was not able to survey the ground for the cottage he would never be able to build the palace. He also disagreed with the author about the quantities. It was becoming more or less the practice with busy architects never to write a specification themselves, but if the young man could not write a specification for a cottage, he would not know how to build the palace, and unless he learned something about it at the Architectural Association he did not know where he could acquire the knowledge. He must know how to write a decent specification which the contractor could understand or else he would not be competent to design a building. He believed in excellent draughtsmanship, which was the first thing to be learned, and in that he included design. Unless they could make a good design they could never get any prizes, and prizes were a sort of advertisement for architects. Architects were unable to advertise like some "dentists" in the newspapers, and so had to resort to some other method, and prizes were a sort of advertisement for them in the junior stages. In the next stage the architect got a competition which he hoped to be able to carry out. If they were able to write out a real specification there was no great difficulty in getting from that stage to the stage of preparing quantities. They might never want to do it, but it was a good plan to know something about it, because then they would know better how construction was done than in any other way—they would get a better grip of the whole building if they knew what was provided to make it. One dreadful thing for architects was the "extras." There had been many cases in the papers lately in regard to these, and he understood they would see some more shortly. They were unfortunate both for the architect and the client, and he did not think they would crop up if the architect knew exactly the amount of money being spent and if they told the client honestly what a thing would cost, and not go into a thing, as some did, with a light heart, hoping it would come out all right in the end. Some clients were becoming very litigious, and the Courts seemed to uphold them more than in the past. When they got a good practice they would be able to pay people to do the things which were distasteful to them, but until then they would have to do them themselves. This raised the awkward question of whether they could get the client to pay for this expert assistance, and if the architect was responsible for the payment of the electric lighting and sanitary experts, and so on, he would find little left for himself. He disagreed with the author about the District Surveyor. Those officials had no right to express opinions about plans, and only gave advice by courtesy and out of the goodness of their hearts. Mr. Max Clarke proceeded to refer to the contract form of the Royal Institute of British Architects which, he said, the Practice Committee was seeking to revise. The present form did not safeguard the architect and client in regard to Employers' Liability, and it was better at the present time not to use that form, unless amended in this particular. Probably few of the students realised the advantages they were enjoying as compared with those available when he was a young man, but the pursuit of architecture required a fearful amount of energy, and he wondered whether they did not devote too much time to football, rifle clubs, and dances. The older men did not think about these things, but if it agreed with the younger generation then it was very nice. He did not agree that the younger men were all hopelessly lacking, because he saw what went on in the Institute examinations from time to time, but what did surprise him was as to how they dealt with so many subjects. Many of those who went in for the examinations were very clever, but there were others whose stupidity was hopeless. In regard to the majority, however, he considered they reflected credit on the teaching of the Architectural Association.

Mr. A. G. Horsnell
seconded the motion, and said he really did not think the subjects touched upon were prosaic. In the grasping nature of some people in light and air cases, ancient lights, and things of that sort, there was fine material for a study of human character apart from that of law, but really he did not think it had anything to do with architecture. Architecture was quite a different matter, but, of course, if such things came their way and they could do them, they did so. No doubt some architects were slacker on certain subjects than on others, but one could always get advice on matters they did not know thoroughly themselves.

Mr. Louis Jacob, F.S.I.,
considered that whether the matter dealt with by the author were prosaic or not, they were most important to an architect starting in practice. These were things which the client himself knew something about, and which he was able to appreciate far more, unfortunately, than a beautiful design. That was perhaps unfortunate from the architectural point of view, but important from the view of practice. He disagreed with Mr. Max Clarke that a District Surveyor only gave an opinion as a matter of courtesy, because a clause in the Building Act said that drawings were to be used as evidence against a person, and therefore he took it that if an architect submitted plans which were wrong in some respects those faults ought to be pointed out to him. Apart from that, he thought the architect would always find it desirable when his scheme was in a

preliminary stage to talk over the matter with the various officials concerned in a friendly way, and he would get more information as to the law and the regulations than if he spent many hours studying the law and the by-laws himself. The law on all these matters wanted codifying. He himself started to do this, but he found it such a gigantic task that he had to drop it. Reference had been made to the Colls case, but he believed that decision had been considerably modified by the case of "Kine *v.* Jolly." He did strongly advise them never to send their conditions of contract to a solicitor, and if it came to an arbitration let it be before surveyors. Of course, with regard to the Royal Institute of British Architects' form of contract, the awkward thing was that directly they began to alter it the builders said it was a form agreed on by the Institute and the master builders, and it ought not to be altered. With regard to constructional design, if they were constantly engaged in building houses, and then perhaps once in ten years they had to build a factory, they found the engineers' formulæ rather a nuisance. He could not help wondering when Mr. Cubitt introduced the Gothic builders if they used this formulæ. He did not think somehow that they did.

Mr. A. O. Collard

thought the paper might have been better entitled "The Mosaic in the Architect's Work," for, after all, the word prosaic did not apply to their work. In the dictionary it meant something dull or uninteresting. He was afraid that many papers on architectural subjects were dull and uninteresting, but the work itself was interesting in every branch of it. He thought the author was absolutely right in advising architects not to undertake the valuation of property or the preparation of quantities, for they were a distinctly different kind of work, involving many differences of working and taking up so much time that the real architect could not be supposed to have time for it. They had often heard discussions as to what an architect should do and what the name implied, and Mr. Cubitt seemed to differentiate between the architect and the surveyor. Most of them to-day were quite willing to drop the word surveyor altogether, and merely call themselves architects, presuming that the greater included the less. He did not think the author's illustration of the composer was quite a happy one, because in that case disaster could occur only to the composer, but in the architectural profession other people were involved, and the result might be disastrous. He did not think any architect at present need go through the process of lopping described by Mr. Cubitt. If he was incompetent he had only to prepare a scheme in pencil and take it to the local Council or the District Surveyor, and it could be amended long before the architect got himself into difficulty and his client into expense. He thought Mr. Cubitt was a little severe on those who might be associated with engineers, for the architect welcomed being associated with the engineer on such a beautiful work as a bridge. He was not aware before that to most architects the question of structural design was uncongenial, for he had found it the most interesting part of their work. It had sometimes occurred to him that the question of professional practice might be dealt with in an earlier stage of the curriculum at the Association, but he was not at all sure about it. By the time they reached the fourth year their minds were more open to the serious subjects which had to be dealt with under the head of professional practice, and he found that students took in a kindly fashion to subjects which probably they had been told were uninteresting. He could assure Mr. Cubitt that under the curriculum running at present there was scarcely a moment to spare for any work outside what was being actually done, whilst if any of the present work was done away with he did not think the curriculum would be as beneficial as it was.

The President

endorsed Mr. Collard's remarks as to the curriculum of the Association. When the student came in the fourth year he was generally in the daytime in an architect's office, and was brought into touch with those points of professional practice which came more or less into all architect's work. Consequently he was interested in knowing more about these matters, and in the excellent course of lectures they had he was able to gain knowledge. Such questions as quantities were special subjects which could engage the whole lifetime of a man, and it was much better for architects not to deal with them. He also supported the suggestion as to consultation with the District Surveyors, who were most courteous, and would spend much time in trying to help their professional brethren. If there was one subject which interested the student it was structural design, and he was taught from the first that structural design was at the root of his design. That was dealt with extremely thoroughly within those walls.

The motion having been carried,

Mr. H. Cubitt

said the argument of Mr. Max Clarke was that the architectural schools should teach in such a way as to produce not an architect necessarily, but an architectural practitioner. He did not agree, and he purposely separated the items of work so as to rule out those which in his opinion could not be called part of an architect's training. They were part of a practitioner's training, but they did not necessarily come into that of an architect. He thought they ought to know enough about quantities to prevent them from undertaking them, although he agreed that the knowledge one gained in learning quantities was most instructive. The real point, however, which he wanted to emphasise was that of structural design. They were told that students were trained in and took delight in structural design, but if that was so why did an architect when called on to design a steel-frame building call in an engineer to do the steelwork for him? Surely steelwork was structural design, and if they designed a building in such a manner as was suitable for stonework, and then made it a steel building designed by someone else, he did not see how they were producing proper architecture. When dealing with the construction of a building, whether of ordinary character or of steel or reinforced concrete, they ought to be able to design that construction, and not merely make elevations and plans and let the construction get muddled through afterwards, which was what happened nowadays. He thought the training of students should be such that they did not relegate to the engineer matters which were for the architect. He did not see why an architect should not design a bridge. An architect was usually thought competent to design such a structure as a grain silo, so why not a bridge? It was not until the beginning of the XIXth century that architects were deprived of this branch of their work, and they now seemed willing to accept the position of not being able to design in the higher branches of structural design. To his mind this was deplorable. He thought they could get to a certain degree of knowledge so that they would understand construction not in a limited number of materials, but in all materials.

The President announced that the next meeting would be held on December 9, when papers entitled "The Practice of the Crafts in Modern Building" would be read by various members (combined meeting with the Art Workers' Guild). There would be also, if it could be arranged, a meeting on December 14 to deal with the question of the Territorial Army.

THE ARCHITECTURAL ASSOCIATION CONVERSAZIONE.

The writer of a recent article in the *Spectator*, entitled "New Country for a Hunt," in which the dinginess and remoteness from the rest of civilised London of the Architectural Museum were somewhat unkindly used as a text, would have been astonished at the appearance of the Museum on Thursday, the 21st, on the occasion of the Architectural Association's Annual Conversazione. He would also have come away with the impression that the present tenant of the Museum is an unusually active and enterprising Society.

The premises are as good as any in London for an occasion of this kind. The central hall, with the walls of its galleries lined with casts, formed a pleasantly mysterious meeting-place for some 400 guests. The decorations, the music, and the casts were an excellent contrast to the more serious enjoyments provided in the rooms adjoining the galleries on each floor.

On the top floor was an exhibition of this years' School work, and was notable for the work done during the first few months of the new third year course in the Day School under Mr. Robert Atkinson. This course is a necessary development of the Association's educational policy, which should give the student a better grasp of the principles underlying architectural design than has hitherto been possible in the short space of two years, during which a great part of his time must be given up to acquiring a knowledge of drawing, history, and construction.

On the first floor gallery was an interesting collection of photographs by the members of the Sketching and Debating Society and some tapestries kindly lent by Messrs. Morris & Co.; but the principal attraction of the evening was an exhibition of prints, plans, and drawings of London in the large room of the first floor—London as it was, as it is, and glimpses of the future. This collection was limited wisely, and divided into three sections—"The River from Greenwich to Chelsea," "St. James's Park," and "Regent-street from Waterloo-place to Primrose-hill," or, as someone aptly put it, "Nash, from the Athenæum to the Zoo." The last of these sections was by far the most comprehensive, and was largely obtained from the collection of Mr. Arthur Ashbridge, who hung them himself in an easily-understood sequence. Nash's design for the lay-out of Regent's Park was shown in a note worthy original water-colour drawing which we do not remember seeing before.

The prints of Regent-street and the Quadrant, with Nash's complete elevation and plans, are at the present time especially interesting. These were amplified by photographs of various portions of the street as altered to meet the present-day needs of the shopkeepers, with the designs for the new street by the late Mr. Norman Shaw, and with Mr. Henry Tanner's design for Oxford-circus. We could not help being struck afresh by the apparently irreconcilable views of the architects and shopkeepers, and perhaps still more by the fact that Nash's street, though altered and mutilated in its lower portions still maintained until the last a uniformity of design which preserved the main effect he was aiming at almost if not quite unspoilt.

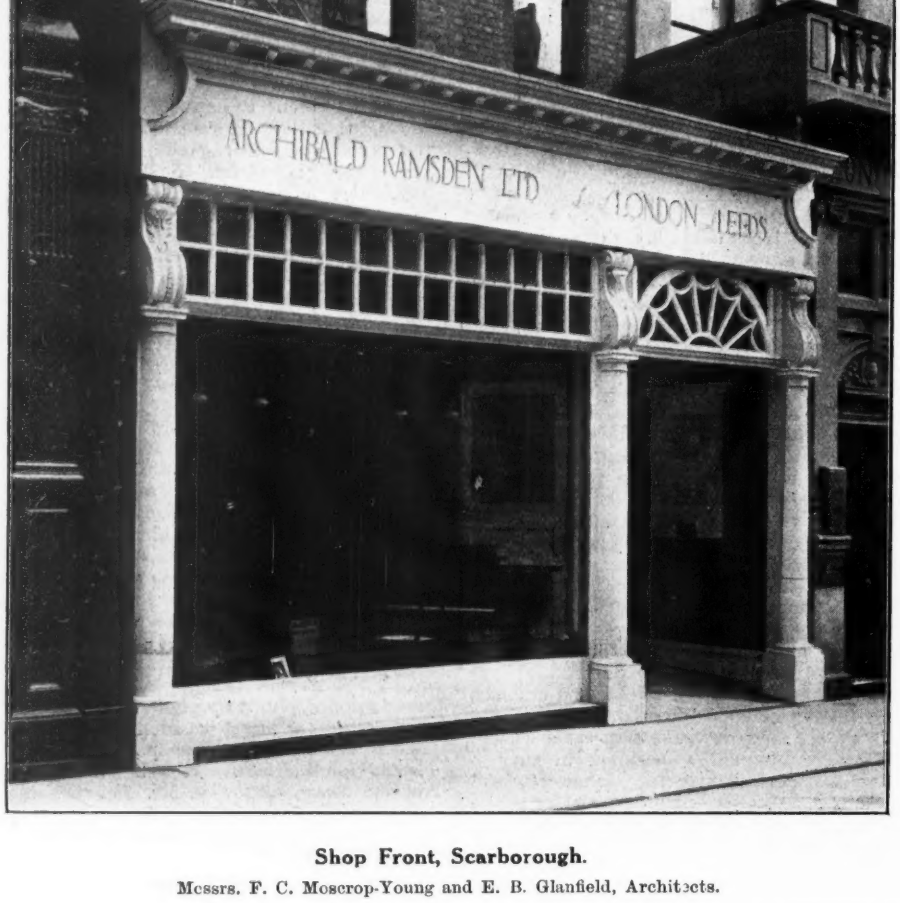
At the Regent's Park end of the scheme it would have been interesting to see some photographs of the new Bedford College, and at the other end some of the new Waterloo-place. The various schemes for the rearrangement of Piccadilly-circus, though generally known, might with advantage have been added to the series for the sake of completeness.

The River is so large a subject that it would have been impossible to have illustrated it at all completely in the space available, but enough was given to lead us to hope that the London Society will deal with it more exhaustively on some future occasion. Most of the exhibits had been seen before at different times, but it was particularly interesting to see them grouped together in this way.

Amongst the drawings not shown before was an excellent view by Mr. Raffles Davison of the south side of the river from the Savoy Hotel. The first of these drawings is called "Derelict London," and it shows accurately and without a trace of exaggeration the wasted opportunities of the finest site in Europe. It also shows very clearly the possibilities of a short cut from Westminster to the City to relieve the traffic on the north side. Drawings by Mr. Brewer, lent by the *Builder*, and Mr. Berrington, emphasising the derelict condition of southern London, were also included.

The proposals embodied on plans and views by Messrs. Barclay Niven and Raffles Davison for removing Charing Cross and building an Imperial Senate House on this side of the river were interesting attempts to tackle the problem, though hardly within the realms of practical politics at present; but everyone will agree that some definite schemes should be laid down soon for the treatment of the whole area before isolated properties are acquired and built upon without any thought for the whole.

Mr. Collcutt and Mr. Berrington lent some suggestive drawings of various schemes of a similar nature which will repay study. An interesting set of plans in this section by Mr. Arthur Crow deals with the problem to be created at the Post Office end of Newgate-street by the influx of traffic from the new St. Paul's Bridge. St. Vedast's Church, as our readers know, is threatened with demolition in the future if the Post Office is rebuilt as at present proposed, and a new road to the east is found necessary later on. The London Society have done well in bringing this matter



Shop Front, Scarborough.

Messrs. F. C. Moscrop-Young and E. B. Glanfield, Architects.

before the public, and we understand the whole question is now being considered in responsible quarters.

A well-known plan of the Palace of Whitehall, in 1670, giving the allocation of the buildings, should be mentioned, and also an unpublished plan of the same subject about 100 years later, lent by Mr. Brooke Kitchen.

The St. James's Park section consisted of plans and views of the Park lent by Sir Aston Webb, R.A., the Institute, and the proprietors of the *Graphic*. It was mainly historical with the exception of some suggestions for dealing with the eyesore at present existing at the opening between Trafalgar-square and the new Admiralty Arch. Part of the Coronation hoarding still remains to cover the raw edges of the partly-demolished buildings An interesting photograph of the Mall, taken from a balloon shortly after the present alterations, led one to think that much valuable information might be obtained by a survey of the whole of London by similar means.

In the limits of a short notice it is impossible to mention more than a very few of the exhibits, and we have confined our attention largely to those which deal more expressly with the possibilities rather than the actualities of London, with the object of emphasising the value of the work which the London Society can do. It was a happy thought of the Council of the Architectural Association to place their rooms at the disposal of the Society for their first exhibition.

SHOP FRONT AT SCARBOROUGH.

THE design of this front was influenced by the clients, Messrs. Archibald Ramsden, Ltd., who desired a large window space for the display of pianos. An attempt has been made to accomplish this without impairing the structural appearance in any way. The front is in American pine finished with "Satinette." The carved trusses were executed by Messrs. Martyn & Co., of Cheltenham. The architects were Messrs. Moscrop-Young & Glanfield, Licentiate and A.R.I.B.A., of Brook-street, W.

IMPROVEMENT SCHEMES, READING.

Reading Corporation have decided to promote a Parliamentary Bill empowering them to reconstruct Caversham Bridge, to erect a new vehicular bridge near Caversham Lock, and to effect other works of improvement to the enlarged borough at a total cost of 93,000*l*.

ARCHITECTURAL SOCIETIES.

Nottingham Architectural Society: Jubilee of the Society.

The members of the Nottingham Architectural Society celebrated the jubilee of the Society on the 12th inst., when a Conversazione was held at the Exchange Hall by permission of the Mayor of Nottingham. Drawings were shown of architectural works lent by the members. The members and friends were received by the President and Miss Sutton. The special designs on the souvenir programme were the work of Mr. F. W. C. Gregory, a member of the Society.

The Presidential address by Mr. Ernest R. Sutton, F.R.I.B.A., was a review of Nottingham's architectural history during the last half-century. In the course of his remarks the President said fifty years ago that night a few Nottingham architects met at the Public Offices by the kind permission of the Mayor, Richard Birkin, when it was decided to create the Nottingham Architectural Society. From its very inception it was a fine healthy child, and found many admirers; it began at once to make its presence felt in the world of art and science. It was most gratifying to know that they still had with them three of the original members—Mr. Robert Booker, Mr. W. A. Heazell, and the President's father. Proceeding, the President said: "I should like to take this opportunity of expressing on behalf of the profession our appreciation and gratitude to those who were the original founders of the Society. The work was done in an admirable manner and the foundations they constructed have proved worthy on which to build the prosperity of the Society. The Society was formed for the promotion of uniformity of practice and for the advancement of the profession of architecture and the various arts and sciences in connexion therewith. I should like to point out that our Society also takes a leading part in all questions of social reform. Take, for instance, the Early Closing Bill, 1912. This matter was receiving the attention of our members as early as 1871, for I find on looking through the 'Minute Book' that at a meeting held in April of that year the architects of Nottingham, on the request of the assistants and pupils, very generously agreed to grant a half-holiday one afternoon in each week, but they made this stipulation, that one clerk must remain in the office so that it shall not be considered closed. Now let us take a hurried survey of our own city. It is a city we all love, and I may be allowed to quote the Bishop of Birmingham: 'We all long for Nottingham to be in every sense an example to others, and it certainly is in many respects.' I regret to say architecture can hardly be said to be one of its strong features, though we must not forget we have one grand masterpiece just outside the city boundary. I, of course, refer to Wollaton Hall, built in 1580.

And what of the progress and development of our city during the period under review? It seems difficult to realise that we had no electric installation for light and power until 1878. In November of that year it was first used for street illumination in the town on the occasion of an entertainment at the Mechanics' Hall, five lamps being utilised outside the building. . . . It was not until 1881 that the University College came into existence, and was opened by the late Duke of Albany. The School of Art was erected in 1863; and the Castle Museum was opened in 1878. . . . As indicating the steady growth and usefulness of our Society, just permit me to remind you that since 1862 the membership has been increased from twenty-two to over ninety. Our first Conversazione was held in 1864. During the past half-century the Society has contributed 116*l*. to the Benevolent Society, 25*l*. to the Nottingham Art Society to promote lecture courses, and 44*l*. 3s. 4d. has been sent for the Victoria Hospital Fund, whilst many small sums have been subscribed from time to time to various charitable undertakings.

Changes in the Style of Architecture.

In the last fifty years we have witnessed many changes in the style of our architecture. In 1862 the Gothic revival was at the zenith of its popularity, and it received its death-blow, as a style suitable for public buildings, on the completion of the Law Courts. At this time the pioneers of the profession turned their attention to our English Renaissance, reviving the details of the architecture from Elizabeth and King James I. and all their varieties to the time of Queen Anne. Still later a mysterious style evolved which gained for itself the collective title of 'the New Art.' Coming to the present time we are now revelling in the Greek art in all its severity. Yes, during these fifty years we have been educating our taste in the historical styles, trying first one and then another, mixing them sometimes, and giving a Jacobean lining to a Georgian overcoat. What revival or new style shall we find when we turn over the next page of our history. Who can tell? We must 'wait and see.' In the sphere of design—and I take it this is the proper sphere of architecture—there is a very marked change in the spirit that is abroad to-day compared with that which inspired or depressed the builder in the middle of the XIXth century. We all know to what depths architecture had fallen; we cannot help knowing, for these buildings of the fifties and sixties will not die, and until a Society is founded with the express object of preserving them they assuredly will not be destroyed. But the very thoroughness with which the average Englishman turned his back on anything rational or graceful in design forced the few who retained some remnants of sensitive feeling into a camp of their own. The Gothic revivalist, these pioneers did great things. Barry and Pugin raised the Houses of Parliament above the level of the Thames. Street essayed a bold composition at the Law Courts, and Gilbert Scott—though his love for mediæval design was often more destructive than protective of the work itself—built churches of not ignoble proportions or mean character. The effort of these men must be judged with due regard to the temper of the public and the opportunities of their time. The revivalists taught us that it was necessary to study proved masterpieces before we could form any artistic aspirations or seek to express them. Their gospel had to be preached before we could have Pearson's work at Truro, Scott's Cathedral at Liverpool, or the fine conception of Bentley's Byzantine pile at Westminster.

Men of the Period.

But what of the men who have graced the ranks of the profession during the past fifty years? It would take long to recount to you all the deeds by which they have attempted to uphold the architectural standard even if we confined ourselves to those who have fought and fallen in the first line. Many of the names will live and many more have interest for us in the fact that their personal efforts

have laid the foundation for much that comes more easily to us to-day. One man was living in 1862 whose influence is still very much alive, is indeed greater perhaps than ever it was. His name was Alfred Stevens, and, though by profession a sculptor, he had a wonderful power in the design of architectural form. In 1864 J. L. Pearson built the Church of St. Peter, Vauxhall, the first modern church vaulted throughout in brick and stone. Pearson was a great artist. Truro was fortunate to find in him the designer of its cathedral, and many of his churches such as Daybrook are well known for their fine proportions and delicacy of detail. It is strange to think that Sir Gilbert Scott was Pearson's senior only by six years, for he seems to have been connected more closely with an earlier period. Scott had done a large proportion of his work before the date of our foundation, and we must remember that Pearson outlived him by nineteen years. At this time Butterfield was still alive and Ewan Christian, both builders of churches. George Edmund Street, the author of the ill-fated Law Courts, Sir Arthur Blomfield, and Alfred Waterhouse—the latter had a wide practice and left his mark in almost every large town, including our own city—these were all eminent architects who worked strenuously for a fine ideal. They were quickly followed by men of equal sincerity, though working in a different style—Nesfield, Mountford, Norman Shaw, and others.

We come to men who are still practising, such as Sir Aston Webb, Sir Ernest George, Dr. Burnet, Mr. John Belcher, Mr. Reginald Blomfield, and their many colleagues. We feel that a delicacy of touch and loftiness of conception has been attained which were perhaps denied to the hard-worked business men of an earlier date.

Past and Present.

There is, I think, little doubt that to-day we can build better than fifty years ago; our materials are better, our cement clings more tenaciously, our bricks and tiles are better burnt, and our whole system of steel construction has made the dream of 1862 a practical reality in 1912. Timber is harder to get in seasoned form, but the world's markets have opened up to us an extraordinary variety and selection of materials, and for the best work the finest stuff is forthcoming. But are we making better use of our wider opportunities than our predecessors who worked without the use of the rolled steel joist, and who had not even the joy of the telephone and the typewriter in their office? If there has been any failure on our part, I shall hasten to say that those last two instruments of torture are wholly accountable for it. Both ancient and modern times have agreed to glory in architecture, for its effects chiefly and for its methods of construction only in a lesser degree. And does not a principle which has held good for thousands of years appeal to so mature a Society as our own, which already boasts a jubilee? There is scarcely a modern movement that does not require our help to solve its practical difficulties or to invest it with importance and becoming dignity. And now even the Government is becoming interested and is cognisant of the value of our profession. There are schemes innumerable to replan our towns and villages, to plant garden cities, in all our centres of industry, and to teach men and women that their homes can be beautiful, their surroundings healthful. Mr. John Burns, with his Town Planning Act, has set the official seal on a wide movement, and it will not be the fault of the architect if it does not lead to great results. The increased activities of public bodies and the awakened interst in worthy buildings combine to give a wider opportunity than architects of the last fifty years have ever known. And I sincerely hope that the Nottingham Architectural Society may witness a great revival in art which shall eclipse its past history, and may Nottingham get a lion's share in the honour and the prizes.

Just one word to our junior members and to those who are about to join our ranks—see that you rally round the Society, keep your standard of efficiency high, and place your ideals on a lofty plane; see that the Society is never engaged in a selfish, mean, or ignoble battle. And when you unfurl the banner for inspection on the centenary celebration of the Society may it bear scars only obtained in fighting for that which is worthy of a noble profession."

Mr. A. N. Bromley conveyed the thanks of those present to Mr. Sutton for his interesting address and to those ladies and gentlemen who had so ably entertained them.

Manchester Society of Architects.

The third meeting of the students of this Society was held on November 19, with Mr. T. H. Hill in the chair. Mr. C. B. Howcroft read a paper on "Mediæval Construction." Mr. Howcroft traced the various elements of mediæval construction from its earliest phases in Roman work to its fullest development in the XIVth century. The lecturer noted that, whilst the development up to the XIVth century was purely on constructional lines, from that date until the end of the XVth century the mediæval builders devoted themselves to the cultivation of the "purely æsthetic."—This gave rise to a somewhat animated discussion, in which the æsthetic value of the flying buttress was severely criticised. The opinion of the meeting was that the excessive height of the interiors was detrimental to the dignity of the exteriors.

THE SURVEYORS' INSTITUTION:
LAND VALUES TAXATION.

THE paper read by Mr. E. M. Konstam before the Surveyors' Institution on the 25th inst., in which he criticises the evidence offered by the "Land Values Group" before the Departmental Committee on Imperial and Local Taxation, is one of considerable interest. In this paper Mr. Konstam did not discuss the probable incidence or the financial effect of the proposals of the Land Values Group, nor the results to be attained by a system of land values taxation—"single tax" or otherwise; but he confined himself to considering, on the evidence submitted before the Departmental Committee, whether any practical suggestions had been put forward. "The question this evening, then, is whether land values taxation, strictly so called, is practical politics or is practical in any sense." It certainly is very unfortunate that the subject of taxation, and especially taxation of land values, one of national importance, should be made the object upon which a series of quack nostrums should be tried. An experimental Budget involving new principles of taxation, which, as we showed in our article on the Inland Revenue Report (the *Builder*, October 11), has already proved an entire failure, seems to have opened out a field for discussion, and every quack in the land at the expense of the national credit is anxious to prescribe his Utopian remedy. Mr. Konstam describes the position well when at the close of his paper he says: "It would be a mere waste of time to examine proposals so crude, so ill-digested, and so shadowy as these, were it not that they claim to embody the only scientific system of taxation, that they pretend to be a cure for all our social ills, and that they are supported by an energetic and expensive propaganda. But the chief excuse for this examination lies in the danger—of which indications have not been wanting—that the Goverment may fall back upon the vague but enormous promises of the Land Values Group for their next election cry. . ." Mr. Konstam, in the course of his paper, shows the justice of the above criticisms on the proposals put forward by the Land Values Group before the Departmental Committee, but reasoned arguments seem of little avail if the object of proposed methods of valuation and taxation is solely to raise political capital.

The Government at the moment accept responsibility for the appointment of a secret commission to inquire into the question of land reform and kindred problems, but profess to have no powers to control its methods or prescribe its procedure. What can be more destructive to credit than semi-official "fishing" inquiries of this subterranean character?

From the observations contained in Mr. Konstam's paper on the proposed amendments of the Budget called for by the Land Values Group it only becomes more and more apparent how ill-advised that speculative measure was and how unlimited may be the price to be paid for it.

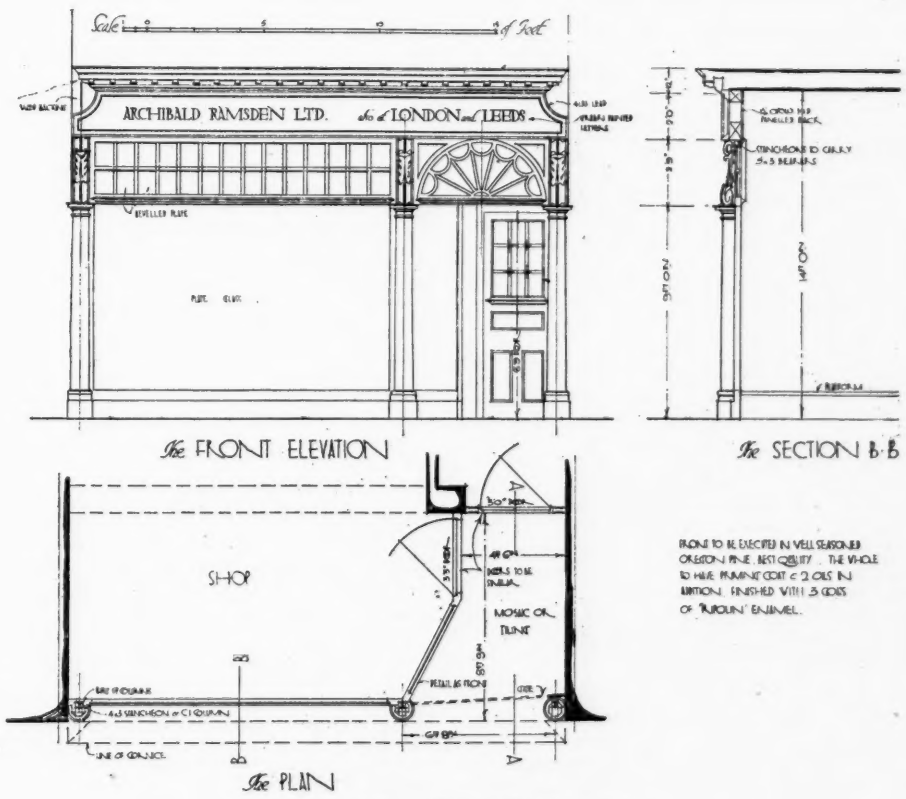
GENERAL NEWS.

Professional Announcement.

Mr. Frank L. Pearson has changed his address from No. 12, Mansfield-street, W, to 22, Ashley-place, Westminster, and his new telephone number is Victoria 2998.

The Late Mr. R. Norman Shaw, R.A.

At the funeral at Hampstead Parish Church, on Thursday last week, were present, amongst others:—Mrs. Norman Shaw and her sons; Sir Edward Poynter, P.R.A.; Sir Aston Webb, R.A.; Mr. T. G. Jackson, R.A.; Sir W. Goscombe John, R.A.; Mr. W. Hamo Thornycroft, R.A.; Mr. A. Hacker, A.R.A.; Mr. Frank Dicksee, R.A.; and Mr. Briton Rivière, R.A.; Sir Ernest George, A.R.A., and Mr. Ernest Newton, A.R.A.; Mr. Leonard Stokes; Mr. W. A. Pite; and Mr. J. J. Joass; Mr. E. T. Tanner for Sir Henry Tanner; Alderman William Woodward, Deputy-Mayor of Hamp-



Detail of Shop Front, Scarborough.

Messrs. F. C. Moscrop-Young and E. B. Glanfield, Architects.

stead; and Mr. R. F. Norton, K.C. The vault is near to the grave of Constable in the old churchyard.

The Royal Sanitary Institute.

The Right Hon. Earl Fortescue (Lord Lieutenant of the County of Devonshire) has consented to accept the office of President of the Twenty-eighth Congress of the Royal Sanitary Institute to be held at Exeter from July 7 to 12, 1913.

London University: Studentship in Archæology.

At a meeting of the Senate last week was gratefully accepted an offer made by the Society of Antiquaries, London, to found and maintain a studentship in archæology in memory of Sir A. Wollaston Franks. K.C.B., F.S.A., etc. The studentship, to the value of 50*l.* per annum, and tenable, in special circumstances, by the same person for two years, will be awarded annually in pursuance of an adopted scheme, to enable a student to conduct research work in the archæology of the United Kingdom.

Stafford House.

In the House of Commons Mr. King asked the representative of the First Commissioner of Works whether he had information that Stafford House had been purchased by a gentleman who intended to offer it to the nation; whether a definite offer had been made; and whether any information could be given on this matter. Mr. Wedgwood Benn replied that the First Commissioner regretted that he could not make any statement on the matter at present.

Planning of Delhi.

In the House of Commons Mr. King asked the Under-Secretary of State for India whether it had been decided to adopt the Italian Renaissance style of architecture for the official buildings at Delhi; and whether the adoption of an Indian style of architecture, as more consonant with the traditions, craftsmanship, and climate of India, had been or would be considered. Mr. H. Baker said the answer to the first question was in the negative. No decision would be taken without giving full weight to the considerations mentioned.

Mr. King also asked if the Under-Secretary of State could state when he expects the report of the Town-Planning Committee which is considering the building of the new Delhi; and whether this Committee will report on the style of architecture to be adopted. Mr. Baker replied that the Committee will reassemble next month, and will report after the inquiry, which is expected to take about two months, has been completed. The question of the style of architecture is outside the scope of the Committee's inquiry.

Widening of St. Martin's-le-Grand.

The City Corporation, at a recent meeting, had before them a report from the Improvements and Finance Committee submitting a plan for widening St. Martin's-le-Grand to 80 ft. and Gresham-street between Aldersgate-street and Foster-lane to 50 ft., on the rebuilding of the old General Post Office. They recommended that, subject to the London County Council's agreeing to contribute one-half the net cost, the two thoroughfares should be widened accordingly. The value of the land to be acquired for the improvement would be settled by arbitration. As the matter was pressing, the Post Office authorities requested the Corporation to come to an immediate decision.—Mr. Sewill moved that the matter be remitted to the committee to complete without delay.—Mr. Douglass Mathews as an amendment suggested that the consideration of the report should be deferred until a printed statement embodying plans and cost of the proposed improvements and the expected relief of traffic from west to east was in the hands of the members.—The amendment was rejected and the committee's report was adopted.

Irish Garden City Scheme.

In the House of Commons recently Sir Thomas Esmonde asked the Chief Secretary to the Lord Lieutenant of Ireland if he would use his influence with the Irish Local Government Board to have the inquiry into the proposed garden city scheme for Gorey, county Wexford, held as speedily as possible; if, on reconsideration of the fact that there is no opposition to the scheme, the Local Government Board was still of the opinion that an inquiry was necessary; and if, pending the inquiry, the Local Government Board would authorise the payment by overdraft with the district councils' treasurers for the site of the proposed scheme.

Mr. Birrell replied that an inquiry could not be dispensed with as the scheme of the district council involved the provision of house accommodation (seventy-six cottages) as well as the purchase of land in respect of which a provisional agreement had been already entered into with the owner. The Local Government Board were not empowered to authorise payment for the land by an overdraft from the councils' treasurer or otherwise in anticipation of the scheme being sanctioned. As to the inquiry, the Board could not give precedence to this case over others.

Old Dee Bridge, Chester.

During the course of excavations connected with the execution of the new hydro-electric works on the River Dee it was discovered that two foundations piers of the Old Dee Bridge were in an unsatisfactory state. This picturesque structure, which crosses the river from Bridge Gate at the end of the street of the same name, dates from the XIIIth century, and the Corporation wisely decided to adopt measures for its preservation. On the recommendation of Sir Francis Fox, all loose material will be removed, and interstices between the stones filled up with cement grout. An invert 9 in. thick in blue brick laid in cement mortar will also be constructed with an apron as a protection against scour.

Defective Roofing Tiles.

The Science Standing Committee of the Royal Institute of British Architects invite members of the Institute and others interested to forward particulars of instances of defective roofing tiles which have come to their notice. It is desirable where possible that such particulars should be accompanied with samples of such defective tiles, with any remarks upon the nature of the defects and their cause, also giving information as to the make of the tile, *i.e.*, hand-made or otherwise, with its place of origin, and any remarks upon the nature of the material from which the tiles were made.

Celluloid Dangers.

Our readers will remember that after the fatal fire in Moor-lane we made some suggestions (see the *Builder*, August 9 last) as to desirable precautions in stores and workshops for celluloid. The Departmental Committee appointed by the Home Secretary to inquire into the precautions necessary in the use of celluloid have now commenced their inquiry and will be glad to receive evidence. It is intimated that persons desirous of giving evidence or of submitting information to the Committee are requested to communicate with the Secretary, Mr. C. G. Markbreiter, of the Home Office.

Translation of an English Book.

The "History of Architecture on the Comparative Method," by Mr. Banister Fletcher, published by B. T. Batsford, has been translated into the Russian language. This undertaking has been accomplished by M. Robert Böker, of St. Petersburg, who is a member of the Imperial Society of Russian Architects.

The Pierpont-Morgan Collection of Ivories at Victoria and Albert Museum.

The Board of Education announce that the collection of ivories exhibited on loan at the Victoria and Albert Museum by Mr. Pierpont Morgan will be withdrawn at the end of the first week in December.

CORRESPONDENCE.

Teachers as Adjudicators.

SIR,—May I be permitted to again trespass on your space in order to clear up a misunderstanding which apparently has arisen from my former letter on this subject?

Professor Adshead, in his reply, refers to my "presupposed assumption that everyone is agreed as to the importance of individual expression," etc. After carefully re-reading my former letter I fail to see how Professor Adshead can read into it any expression of such views as he attributes to me.

The demolition of arguments set up by an individual for the exercise of his own powers of debate is never a very difficult accomplishment, and a criticism of "those who seek to express their uncultured individuality, prizing this before all else," can have no bearing on the point I raised. Professor Adshead agrees with my views that the Testimonies of Study should be the unaided work of the candidate, and he points out that "only the evidence of those who submitted the designs referred to" could satisfy my suspicions. Quite so; but may I also point out that this statement does not in itself constitute the evidence? And I venture to think that, in the absence of such evidence, Professor Adshead would experience much difficulty in convincing most people that the same similarity could have resulted had these designs been prepared *en loge* instead of "under supervision."

As to the fresh point regarding the value of "uncultured individuality," there can be no two opinions. There is, however, such a thing as "cultured individuality," and surely the pure scholarship of a Bramante or a Donaldson cannot be said to have been of at all comparable value to the cultured individualism of a Perruzzi or a Norman Shaw? By the way, is it not a peculiar coincidence that Professor Adshead's somewhat slashing criticism of the exercise of individuality in architectural design should appear in the same issue as your obituary notice so appreciative of the individuality—and its influence—of the late Mr. Shaw?

With Registration, the accepted policy of the Royal Institute of British Architects, it is more than ever incumbent upon the examiners to make these examinations a test of each individual's ability rather than a portion of his educational exercises. Were the examinations a real test of individual ability they would incidentally serve to demonstrate the value of any system of education whether based on a creed which "demands the suppression of individuality" or not.

Should it come to pass that several candidates educated on the system referred to, and working *en loge*, actually should produce designs as similar as the ones in question, then I would most emphatically assert that the "suppression of individuality" had been carried to such an extreme as to render real progress impossible, however much it might assist in the "dragooning" of students up to a certain degree of scholarship. ALREADY AN ASSOCIATE.

SIR,—Your correspondent "Already an Associate" implies that the designs published recently for a ballroom, and accepted as Testimonies of Study by the Royal Institute of British Architects, were done under the "supervision" of the Professors of the Liverpool University. He even suggests that this "supervision" amounted to "material assistance."

As regards my own design, I may say that it is over two years since I was a student of the University.

My design was purely my own, and whatever similarity there might have been must be attributed to the influence of my training in the school of which I was a student.

ERNEST PRESTWICH.

[*** We have received a letter from Mr. H. C. Bradshaw, of Liverpool, making a similar disclaimer.—ED.]

The Presidential Invitation to Associates.

SIR,—The Presidential invitation to Associates qualified to become Fellows has become quite a homely feature in recent Presidential addresses. This invitation persistently implies a far more optimistic outlook than the facts really warrant. Apart from the question as to whether the Fellowship is invested with the honour it deserves, are we sure that the necessary qualifications are so closely within reach as our Presidents believe?

The recently proposed inquiry into the Associate membership of the Royal Institute to discover the relative proportion of those qualified for the Fellowship has not, apparently, been proceeded with by the present Council. No estimate of the probable percentage of the apathetic possible candidates for higher honours has been stated. When that estimate has been made, and the figures found to correspond with the official view, will any further inquiry be proposed to assess the utter impossibility of the hypothetical minority ever attaining the qualification necessary for the Fellowship? Doubtless many Associates would not care

to declare their lack of qualification, and are naturally repugnant of a clear statement of their position, knowing the prospects of the future and ceaselessly endeavouring to find a mental compromise which will afford them some solace.

It is an easy matter to conclude that the whole of the membership of the Royal Institute is on an equally favourable professional footing with those we are brought into daily contact with. The conditions necessary for successful practice, or possibilities of practice, are evidently those of business opportunity, social position, and recognised ability. How often are these conditions completely divorced! We know that at least 30 per cent. of the students at a well-known architectural school are only heard of in after life as assistants, whilst some of the happy majority are practising before they leave! Those of us who have wandered from office to office during a long range of professional experience are aware of the large number whose opportunities are confined to competition work, in which, even if successful, the final issue is unsecured.

The enormous number of assistants (among whom the Royal Institute is well represented) who are employed in municipal offices and by many large corporate bodies, should invite some consideration as to the possibilities of future candidature for the Fellowship.

How many of us are glad to find a final refuge in offices whose architectural reputation is only at the level of average private practice, and rarely, if ever, take a flight beyond?

These few reflections may, perhaps, modify the very generous views of the potentialities of professional success so often held by our Presidents in their efforts to encourage the younger members of the Royal Institute.

ERNEST J. DIXON, A.R.I.B.A.

Fire Protection in London and the London County Council.

SIR,—The Coroner in summing up at the Kensington fire inquest on Thursday, 21st inst., is reported to have spoken as follows:—

"The calamity made one wonder how many other buildings in London were in the same condition as they were told Messrs. Barkers' premises were; how the many negotiations were going on, and how many buildings were waiting before the necessary alterations were to be made?"

I wish to take the earliest opportunity of publicly replying to these questions. There are upwards of 50,000 buildings in the metropolis at the present moment to which the London Building Act Amendment Act of 1905 has not yet been applied.

Although this Amendment Act has been in force now for upwards of seven years, the Superintending Architect of the London County Council, giving evidence before the House of Commons Committee on the London County Council General Powers Bill (1912) in June last, stated that only 2,330 buildings had been scheduled for action at that date, and that the Building Act Committee of the London County Council had only considered 1,203 of those cases. Of these 1,203 cases only 527 had at that date been satisfactorily equipped by the provision of suitable means of escape, and the balance were in what might be termed a state of negotiation.

That so few buildings (527) should have been put in order out of approximately 50,000 cases in the long period of seven years is a matter of gravest import, but the balance should not in any way be attributed to the Superintending Architect nor his officers, but specifically to the London County Council in its corporate capacity, which does not give its Building Act Department either the necessary means, the necessary staff, or the necessary encouragement to carry out the requirements of the Building Act Amendment Act energetically and promptly.

It is not for me to go into the reason why the County Council should apparently have been so adverse to allowing its officers to carry out their obvious duties, but the fact remains that indirectly the responsibility for lives lost in such buildings as the Barker establishment must fall on the shoulders of the authorities rather than the building owners, who, owing to the Council's known apathy, practically consider the Amendment Act of 1905 a dead-letter.

Thus the short reply to the Coroner's question is that quite an enormous number of buildings in the metropolis are in the same condition as the one which was under review at the inquest—that but very few negotiations are going on as to remedying this state of affairs, and that quite 50,000 buildings are waiting for the necessary alterations to be made.

It is to be hoped that the Barker fire will awaken the London County Council to its duties in this particular matter. With the necessary staff and facilities, and with the diligence which the County Council occasionally applies to other departments of its work, the outstanding 50,000 buildings should be put in proper order within the next five years.

EDWIN O. SACHS.

Should the Names of Assessors be Known to Competitors?

We have received the following "Open Letter" addressed to the Royal Institute of British Architects:—

GENTLEMEN,—I earnestly appeal to you to use all your influence to bring to an end the evil custom of publishing the names of assessors in architectural competitions before the designs are sent in to be judged. The practical outcome of publishing the names beforehand has been to prevent many from competing who have felt unable to sympathise with the taste and ideals of the assessor. But the greatest evil of all is that men are induced to design up or down to the assessor's level; not setting out to do what they honestly feel to be the very best they are capable of, but for the sake of the reward to prostitute their powers by endeavouring to appeal to the taste of the assessor. Let no competitor know who is to be his judge, and you at once remove a powerful inducement to unfaithfulness. It is a fearful tyranny that imposes any style on a designer.

Conditions and requirements and moral law are enough data from which to produce the noblest architecture if properly attended to, assuming, of course, some degree of native refined sensibility. But when any style is imposed upon the designer the conditions and requirements that ought to control him are made subservient to the style. The poor plan has to be sqeezed like a Chinese foot, and the honest expression of needs is sacrificed to the conventional commonplace of symmetry. The supposed leaders in the profession by this system can impose upon the British public the deadly dull imitations of the style they affect, hence we have seen public buildings arise one after the other with the same trail of the serpent over them all. No healthy national style can be artificially grown in this way.

C. F. A. VOYSEY.

Competition Results.

SIR,—I should be much obliged if someone would be kind enough to state what is the customary method regarding competition results.

I submitted drawings in a recent competition, but up to the present time I have had no notification of any sort as to the result, although (by chance) I have seen the awards published in a weekly paper.

I should have thought that the competitors, after spending much time and thought on the work, ought to be the first to receive individual notification of the assessor's selections

A RECENT COMPETITOR.

INTERCOMMUNICATION COLUMN.

Effect of Great Heat on Stone.

SIR,—Replying to your correspondent's query *re* above in your issue for November 15, p. 576, we beg to state that great heat on oölitic stones would produce lime, which the first shower of rain would cause to fall in powder. On the other hand, great heat on sandstones would cause little effect, provided the sandstones were dry, whereas if it is moist it is likely to burst to pieces. When the Safe Deposit Company building was about to be erected we had several kinds of sandstone tested by placing them on the bridge of a furnace; the heat being applied too suddenly caused most of the stones to explode, the coarser grained standing the best. However fine grained, standstone will stand great heat if thoroughly dry, as may be seen from the fact that it is sometimes used for lining furnaces.

SAMUEL TRICKETT & SONS.

BOOKS.

Building Construction (*Advanced and Honours Course*). By C. F. MITCHELL and G. A. MITCHELL. Seventh edition, revised and enlarged. Illustrated. (London: B. T. Batsford. Price 6s.)

THE rapid evolution of materials and methods of construction alike that have taken place since the issue of the sixth edition of this well-known text-book has necessitated the revision of the whole, and the rewriting of parts in order to bring it once more into line with the best of current practice, and upon the result the authors are to be congratulated, for the book now under our notice forms a complete epitome of all that is most up to date in the building world of to-day. A feature of the work is the full text, which the authors have wisely added, of such matters as the R.I.B.A. revised Report on Reinforced Concrete, the L.C.C. proposed regulations on the same subject, the recent work of the Engineering Standards Committee and similar bodies, all of which adds to the value of the book as a work of reference as well as a text-book. The illustrations, numbering over 800, are clear and thoroughly explanatory, while the calculated examples, which are numerous and complete, are specially selected for their bearing upon current practice. The issue, in short, attains the high standard of its predecessors and of the firm which publishes it.

Practical Mathematics. By EDWARD L. BATES and FREDERICK CHARLESWORTH, Wh. Ex. (London: B. T. Batsford. 1912. Pp. 513. 3s. net.)

COMPRISING a complete course of instruction for technical students, and adapted to the requirements of the Syllabus of the Board of Education Lower Stage Examinations, this text-book will enable anyone who has mastered its contents to follow intelligently any simple technical or scientific subjects he may require to study. The work is one of comprehensive character. No previous knowledge of the subject on the part of the student is assumed by the authors, and, in consequence, the book may be taken up by the mere beginner. At the same time a prominent feature is the thorough manner in which it explains the practical application of mathematical principles to the problems daily encountered by architects, surveyors, builders, and others.

The sections relating to rates of increase, differentiation, and integration will be found of service as an introduction to more advanced text-books on branches of science allied with professional work, and to the use of the calculus for the solution of practical problems.

Like other works by the same authors, this book is very clearly written and well illustrated by diagrams.

Practical Geometry and Graphics. By EDWARD L. BATES and FREDERICK CHARLESWORTH, Wh. Ex. (London: B. T. Batsford. 1912. Pp. 621. 4s. net.)

INTENDED for students in technical and trade schools, and specially arranged to meet the revised requirements of the Board of Education, this book presents in convenient form the fundamental principles of practical geometry and graphics, and shows how these are applicable to some of the problems occurring in practical work.

The book is arranged in three parts, devoted to plane geometry, graphics, and descriptive geometry respectively. In the first part will be found a very adequate treatment of mensuration and calculations relating thereto, an important chapter on loci and loci methods of solving problems, and a somewhat extended chapter on conics. In the second part the general subject of graphics has been developed at greater length than is usual in text-books of the same class, the treatment being such as to enable students to realise the practical utility of graphical methods of solving problems. The use of squared paper, velocity, and acceleration diagrams, simple and harmonic motion, and valve diagrams, are among other subjects thoroughly discussed in the same part.

The work contains a large number of practical exercises with answers, and the numerous diagrams are very clearly drawn and printed. The book is one we have every confidence in recommending to our readers.

ILLUSTRATIONS.

The Work of Mr. Winter Rose.

ALL our Plates this week are in illustration of the work of Mr. A. Winter Rose, to whose career reference is made in the article beginning on page 647.

MEETINGS.

FRIDAY, NOVEMBER 29.

Edinburgh Architectural Association.—Associates' annual smoking concert.

University Extension.—Visit to the Tower of London, St. John's Chapel, etc. 2.15 p.m.

MONDAY, DECEMBER 2.

Royal Institute of British Architects.—Business meeting. (1) Election of candidates for membership. (2) Mr. G. A. T. Middleton has given notice of his intention to inquire—(i.) Whether it is true that, while Testimonies of Study for the Intermediate Examination had to be submitted by September 28, those candidates who were relegated were only informed by letter dated November 8 and posted so as to reach even London residents late on November 9, when they were required to furnish alternative drawings by the morning of November 15; and, if so, whether in the opinion of the Examiners this is reasonable. (ii.) Whether the Board of Architectural Education is aware that there are rumours of laxity in permitting candidates to leave the room temporarily during the progress of the examinations, and in allowing communications to pass between the candidates. (iii.) Whether, at the Final Examination, the fact that a candidate is young is of itself prejudicial to his chance of success. (3) Mr. Robt. J. Angel has given notice that he will bring before the meeting the question of architects tendering for the preparation of designs, etc., of buildings, and in particular an instance of certain architects who submitted tenders to the Wigan Education Authority for designs, etc., and quantities for the erection of a High School for Girls. 5 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. C. R. Darling on "Methods of Economising Heat"—I. 8 p.m.

The Society of Engineers.—Mr. Percy J. Waldram, F.S.I., on "The Deflection of Reinforced Concrete Beams." 7.30 p.m.

London University (Victoria and Albert Museum).—Mr. Banister Fletcher on "Gothic Cathedrals of France." 5 p.m.

TUESDAY, DECEMBER 3.

Society for the Promotion of Roman Studies.—Professor Haverfield on "The Coast Defences of Britain about A.D. 400." With lantern illustrations. 4.30 p.m.

The London University (British Museum).—Mr. Kaines Smith on "Sources of Art: The City State."

The Institution of Civil Engineers.—Mr. C. J. Bowen Cooke on "Mechanical Handling of Coal for British Locomotives," and Mr. Francis Carnegie on "The Vibration of Rifle-Barrels." 8 p.m.

The Illuminating Engineering Society.—Messrs. F. W. Willcox and H. C. Wheat on "Modern Methods of Indirect Lighting—Their Advantages and Merits" (to be held at the Royal Society of Arts). 8 p.m.

WEDNESDAY, DECEMBER 4.

The Royal Archæological Institute.—Mr. R. H. Forster, LL.B., F.S.A., on "The Corbridge Excavations, 1912." 4.30 p.m.

Edinburgh Architectural Association.—Mr. Percy H. FitzGerald, M.A., F.S.A., on "Robert Adam, Artist and Architect." Lantern slides. 8 p.m.

Institute of Sanitary Engineers.—8 p.m.

Guild of Architects' Assistants (Room 22, St. Bride Foundation, Bride-lane, Fleet-street, E.C.).—Paper by Mr. W. H. Baker, entitled "My Experience of the Formation of an Approved Society"—National Insurance Act. 7.30 p.m.

THURSDAY, DECEMBER 5.

Society of Antiquaries.—8.30 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "Greek Ionic Temples." 4.30 p.m.

University of London (Victoria and Albert Museum).—Mr. Kaines Smith, M.A. on "Decoration of Buildings—Glass." 3.30 p.m.

FRIDAY, DECEMBER 6.

Glasgow Technical College Architectural Craftsmen's Society—Professor C. Gourlay, B.Sc., on "A Review of Byzantine and Italian Architecture."

SATURDAY, DECEMBER 7.

Aberdeen Architectural Association—Mr. Thomas Beattie on "Decorative Plasterwork, and the Adaptation of Old Methods to Modern Requirements." Illustrated. 7.30 p.m.

BOOKS RECEIVED.

SEWAGE DISPOSAL IN THE UNITED KINGDOM. By Lemmoin Cannon. (London: St. Bride's Press. 7s. 6d.)

THE ENGLISH FIREPLACE. By L. A. Shuffrey. (London: B. T. Batsford. 2*l.* 2s. net.)

COMPETITION NEWS.

A list of current Competitions is printed on page 662.

Municipal Buildings, Kingston, Jamaica.

The Mayor and Council of Kingston, Jamaica, offer a premium of 100*l.* for a design or Municipal Buildings in Kingston, Jamaica (B.W.I.), to cost not exceeding 9,000*l.*, to be approved and accepted by them. The buildings must provide all necessary municipal offices and appurtenances and a town hall in accordance with the plan showing the site and indicating the accommodation required, copies of which may be obtained on application to Messrs. Alexander Young (London), Ltd., of 60, Fenchurch-street, London, E.C., on payment of 2s. each copy. The design must be suitable for construction in reinforced concrete. Designs must be sent in not later than January 31, 1913, addressed to the Mayor and Council, Kingston, Jamaica (B.W.I.).

ENGINEERING SOCIETIES.

The Institution of Civil Engineers.

At the ordinary meeting of the Institution on the 26th inst. a paper on "Mechanical Handling of Coal for British Locomotives" was read by Mr. C. J. Bowen Cooke, M.Inst.C.E. Owing to the growth of traffic and the heavier loads which have to be hauled at the present time, it has been found expedient to adopt, at the extensive running-shed of the London and North-Western Railway Company at Crewe some more expeditious method than "man-handling" for loading engines with coal, and after much deliberation the mechanical coal-handling plant described in the paper has been installed. The plant was made by Messrs. Babcock & Wilcox, and is the joint design of the author and that firm. The points to which careful consideration had to be given were numerous, particular attention being paid amongst other points to the impracticability of an appliance capable of dealing with coal between wagon and tender, wagon and stack, or stack and wagon. With regard to this point, the various known types of apparatus limited the choice to one or two types, namely (*a*) that built by certain railway companies abroad, in which the handling of stock and current coal by gravity-bucket, or belt-conveyer, is combined; (*b*) some form of power-driven crane and grab-bucket.

The stock in plants of type (*a*) rarely exceed 3,000 tons and is situated in bunkers, either underground and immediately under the coaling-stage, or above ground and forming part of the coaling-stage. In the latter case coal placed in stock would be handled no less than six times between the colliery and the locomotive-tender, with consequent breakage of coal at each stage. It is found that at nearly all depôts in this country where the annual consumption is sufficient to warrant the installation of mechanical handling the stock coal greatly exceeds 3,000 tons, so that this type of plant appears undesirable.

Regarding type (*b*), a grab-bucket is limited in size by the receptacle from which it picks its load, and when working from an ordinary type of English railway-wagon such an appliance becomes anything but economical in its operation. The maximum size which can be usefully worked is about 44 cubic ft. or 1 ton, little margin being then left for steering between the sides of the wagon. Again, a good deal of the efficiency of a grab-bucket depends on the drop it gets into the material, but when such material consists of large lumps of coal carried in a wooden truck which is liable to damage the efficiency of the grab is reduced in an excessive degree.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W. Lord Cheylesmore, Chairman, presiding.

Loans.—The Finance Committee recommended that loans be made as follows:—Lambeth Guardians. 5,889*l.* for poor law purposes; and Woolwich Borough Council, 1,400*l.* for sanitary conveniences.

The Kensington Fire.—A report was submitted by the Building Acts Committee on the celluloid fire which occurred last July in Moor-lane, and details were given of the requirements, of which notice was served upon the owners of the property some years before by the Council, and of litigation which had ensued. The Chairman of the Committee, in referring to the recent fire at Messrs. Barker's, Kensington, said that the building was one of twelve special cases which the Committee had decided to deal with in February last. The firm, however, were not prepared to accept the Council's suggestions, and after negotiations the Committee were informed that Messrs. Barker's architects were preparing plans to be submitted to the next meeting of the Board, but before that meeting the fire occurred.

In replying to complaints that the Council had not applied the provisions of the Act of 1905 to all the large buildings of London, the Chairman of the Committee went on to say that if it were possible to attempt to put the Act into operation at once all over London there would be such an outcry and stoppage of business that it could not be carried out. The Committee, however, was doing an enormous amount of work, and up to the present they had considered some 1,889 cases, out of which over 1,000 certificates had been issued, 619 buildings had been put into a satisfactory condition, and in 23,500 cases owners had been warned of their responsibilities. The report of the Committee was adopted.

Cinematograph Theatres.—Drawings have been submitted by Mr. C. A. Aish for proposed alteration and extension of the Empress Electric Theatre, Mare-street, Hackney; and by Messrs. Saville & Martin for a new cinema proposed to be erected at Nos. 593-597, Old Kent-road.

FIFTY YEARS AGO.

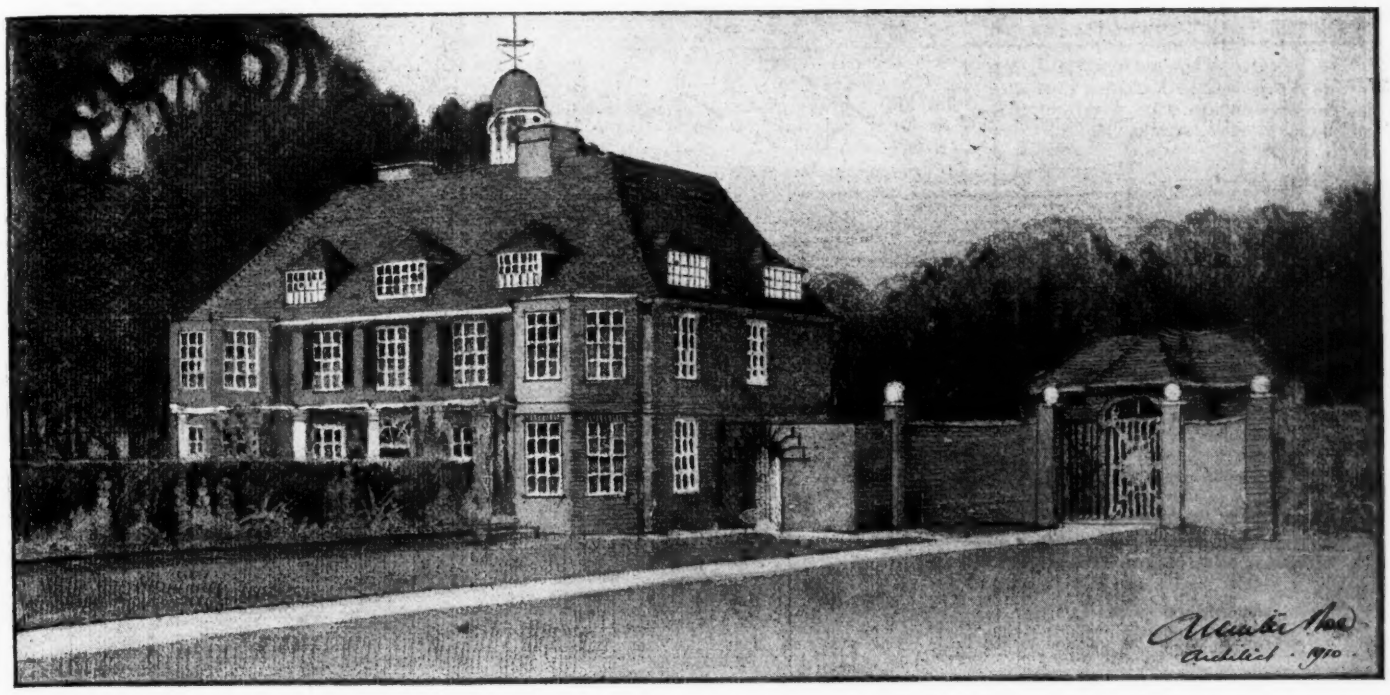
From the *Builder* of November 29, 1862.

Voluntary Architectural Examinations.

THE announcement which our advertising columns contained some short time since, that the first of the voluntary examinations in architecture is to take place in January next, will not have passed unnoticed by many readers. This scheme of examinations is an effort for the advancement of the profession, made in good faith, and at no small trouble, and possibly pregnant with results of the greatest value.

For many years past the desirability of establishing some test of attainments through which a professional man should pass ere he enters upon the responsible exercise of his duty has been appreciated more and more widely; and in those professions where a large proportion of the objects of preliminary study are entirely matters of fact examinations have been readily established.

*** In 1882 it was determined that an examination upon the lines of the voluntary examination should be made compulsory upon all who sought to become Associates of the Institute. The proposal aroused a fierce opposition among many of the most prominent men in the profession, upon grounds that appear very insufficient as one re-reads the long letters to the *Times* which from day to day filled its columns. The adequacy of "tests" in a general sense was legitimately controversial, and is so still. Competence can be reached only by the path of experience, and this cannot precede an "entrance" examination. But the responsibilities of the architect are many, and an examination as a means of calling attention to these, acts as a safeguard lest any should be, as they have been and still may be, overlooked. Mediæval conceptions of the architect's functions are no longer tenable, while since Rennie, with the scientific training of the engineer, built Waterloo Bridge, and Capt. Fowke, similarly trained, designed the additions to South Kensington Museum, a liberal view of constructive possibilities, and an acquaintance with business procedure, cannot be considered as hostile forces in the training of the architect.—ED.



Proposed House at Purley, Surrey.

THE WORK OF MR. WINTER ROSE.

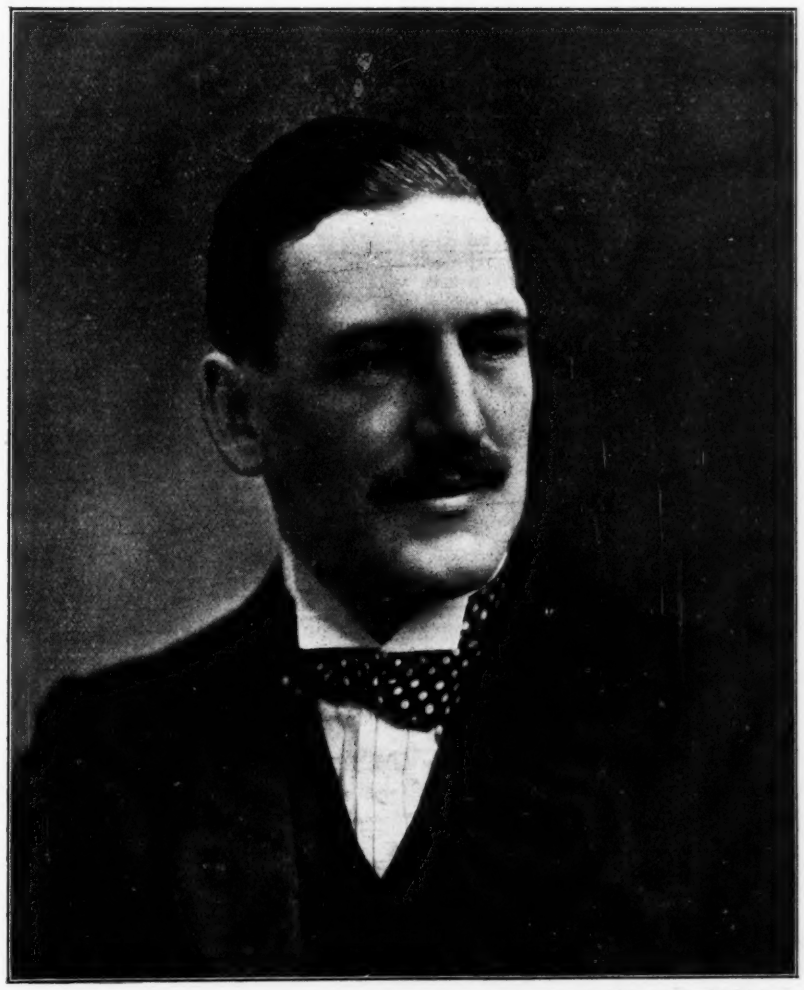
IT is always interesting to trace the gradual emergence of one of the younger generation from the comparative obscurity of adolescence to the luminous path of success. Some men never secure recognition, and their progress, though marked by some promising incidents, stops short of real achievement. In the artistic world this is specially so, and it needs but a glance through a list of prize-winning students to see that the work of the world has not been done inevitably by those who have shown marks of genius in their early days. The causes of failure or of comparative failure are discovered with difficulty in many cases, but the elements which contribute to fulfilment are seldom unknown. Conspicuous among the younger architects of the present day is Mr. A. Winter Rose, whose name is a paradox, but whose work is far from being so. It is but six years since Mr. Rose won the Travelling Studentship of the Architectural Association, and he is now in the midst of a considerable practice. His work, as represented by our illustrations, will be studied, therefore, with interest, not only in a vein of inquiry, but in prophetic expectancy.

Born at Cambridge just short of thirty years ago, and educated chiefly at Bedford School, Mr. Winter Rose early felt the call of architecture. In his aspirations he was encouraged by his cousin, Mr. George Shackle, who had been in the office of the late Mr. J. L. Pearson, R.A. Mr. Rose was articled to Messrs. Usher & Anthony, of Bedford, and spent much of his time, unofficially, with the pupils of Mr. C. E. Mallows, who at that time was practising in the town. To this source possibly may be traced Mr. Rose's interest in garden design and equipment and his powers as a draughtsman.

Out of his articles about 1905, Mr. Winter Rose became managing assistant to Mr. W. Beddoe Rees, A.R.I.B.A., of Cardiff. The Cory Garden City scheme was then in preparation, but was not in progress, and Mr. Rose was engaged in designing chapels built in various parts of Wales: as assistant architect he was concerned with those at Cardiff, Llanhilleth, Nantyfyllon (Maesteg), Pontypool, Wattstown, and Briton Ferry. After a few months at Birmingham he took a position with the Office of Works in London, and was responsible for the Twickenham Post Office, some alterations to the Guildford Post Office, and other work.

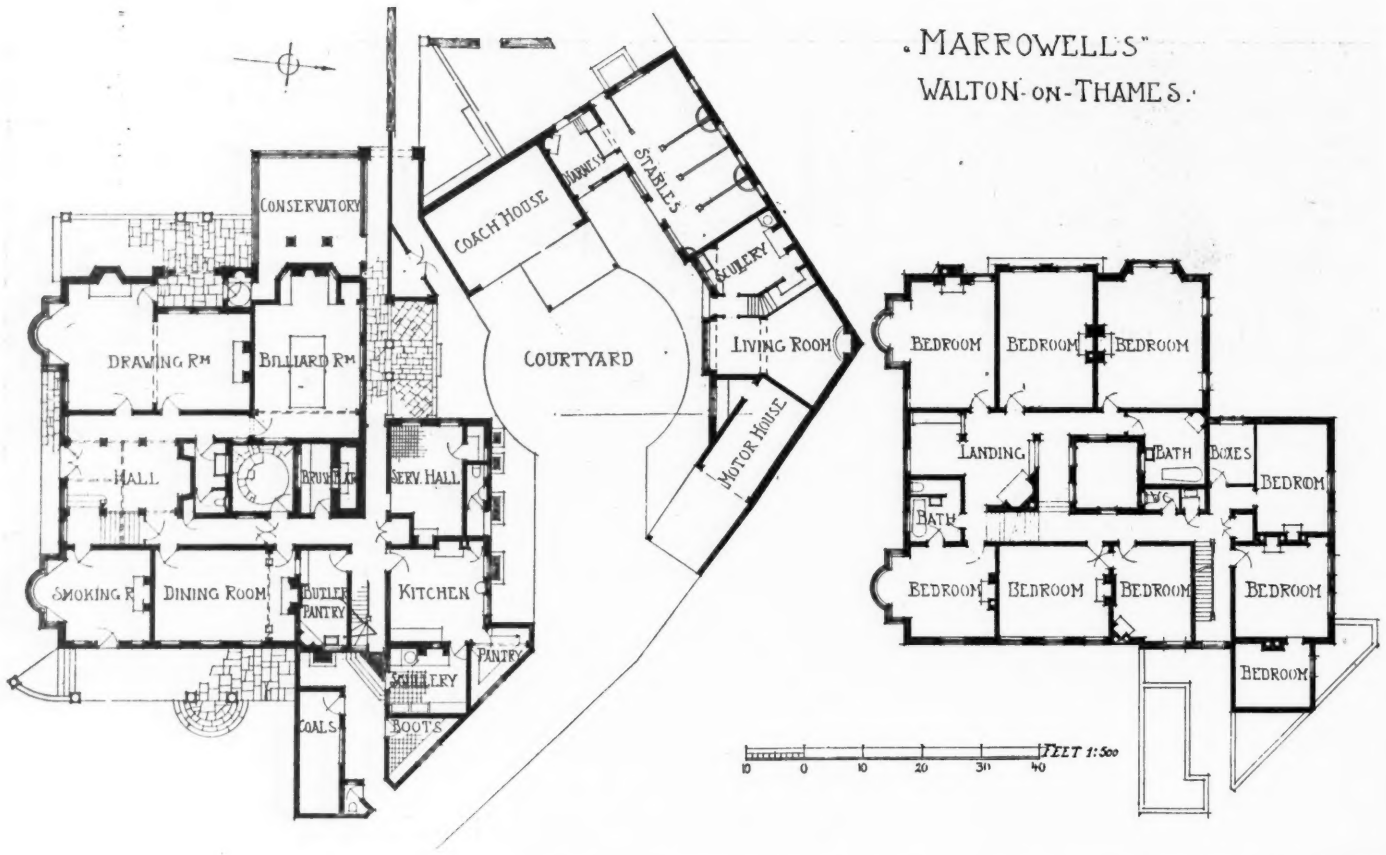
Mr. Rose worked with Mr. W. D. Caröe, F.R.I.B.A., in connexion with the South Wales University College, Cardiff. He was also to a small extent in practice on his own account. In 1905 he became a student at the Architectural Association, and the year following won the A.A. Travelling Studentship, his original designs being an entrance lodge and gates to a public park, a wayside inn, and a specimen house at Kew; he sent in also some sketches and measured drawings of Queens' College and of the Senate House, Cambridge. In 1908 Mr. Rose was awarded by the Council of the Royal Institute of British Architects a prize of ten guineas for his competitive drawings for the Pugin Studentship, won that year by Mr. Sidney G. Follett.

Mr. Rose elected to travel in England to acquit himself of the A.A. Studentship, and it was during his tour that he became convinced of the possibilities of domestic architecture. He travelled specially in Norfolk and Cambridgeshire and saw for himself, as a critical student, the memorable work of other days as well as modern products with which he could be little in sympathy. To restore to domestic architecture the dignity and charm of the past, while introducing such modifications of plan and design as were necessary to meet the needs of the present day, became his ambition. He felt strongly, as others have felt, that, in spite of Bacon, houses should be built to look on as well as to live in. His bias was towards the early XVIIIth century, the pre-



[*Portrait by Reginald Haines.*

Mr. A. Winter Rose.

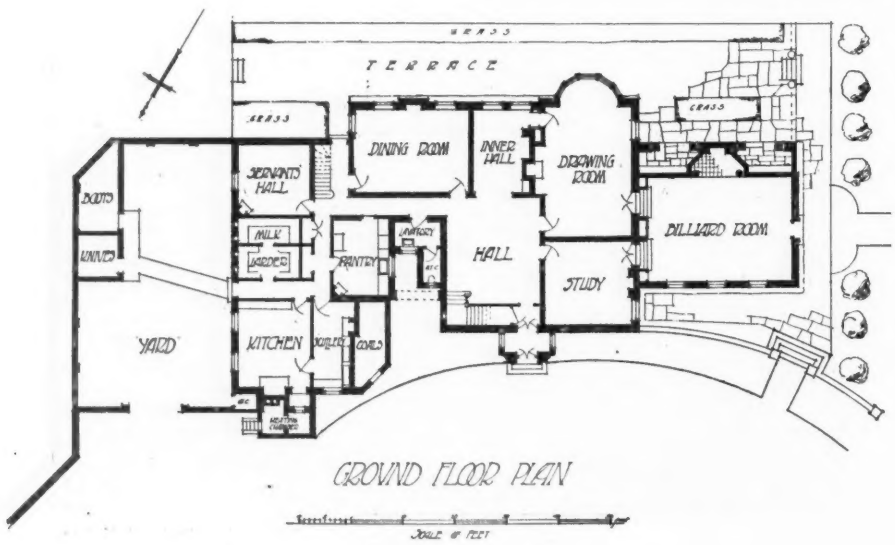


stucco era, and for working purposes his thoughts may be said to have been cast back to the "glorious reigne of the most serene our gratious sovereigne lady, Queen Anne," to quote part of the ancient inscription on Petyt House, Chelsea.

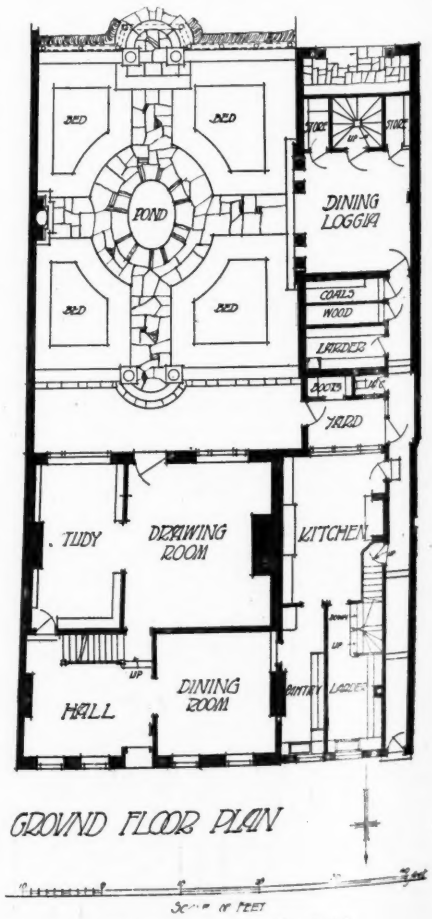
Fairly launched in practice by 1908, Mr. Rose in that year exhibited at the R.A. Exhibition his "Design for Church and Manse, Welholme-road, Grimsby," which was one of his few competition designs; it was placed, but never carried out. Two years afterwards he sent a drawing of "Marrowells," Walton-on-Thames. This house, then just completed, stands on a site which was originally part of the far-reaching Windsor Forest. Designed in a manner reminiscent of the many early Georgian mansions to be found on the banks of the Thames between Chelsea and Windsor, its appearance is attractive, not only on account of its general features, but because of its details, such as the hooded doorway, the brick-work quoins, and the conspicuous cornice. The colour scheme was carefully considered. Old tiles of a deep red hue were used for the roof and Surrey bricks of a brighter tint for the walls. The exterior woodwork was painted white, with the exception of the Venetian shutters, which were painted sage-green. The plan above shows the accommodation secured, and the interior work is in harmony with the rest of the building. The garden formed an important attribute to the house, and the illustrations show how successfully architectural character was imparted.

The House at Chatteris in the Isle of Ely (R.A. 1911) looks romantic, judging from the drawing reproduced on one of our Plates. It is in a composite style, and derives some of its character from its Flemish origin. But, in spite of its somewhat alien appearance, local confirmation was found for the design, no doubt, for Mr. Winter Rose is nothing if not an Englishman, and would not care to import any direct suggestion from abroad. Additions to "Millfield," Brentwood, were in progress at about the same time, as the drawings shown at the Royal Academy in 1911 testify; these are also reproduced on one of our Plates. The billiard-room in this house was one of Mr. Rose's experiments in interior design and decoration, the whole, with the exception of the table itself, being his work. The general colour scheme was grey, against which the furniture and crimson curtains set off agreeably; while the permanent features, such as the fireplace recess, with its fluted columns, and the exit to the garden, give dignity to the room. The garden at "Millfield" was laid out also by the architect.

The reconstruction of "Morton House," Hatfield, exercised Mr. Rose's ingenuity to the utmost, but the result is entirely satisfactory. The original house consisted of four rooms on the ground floor, divided by a narrow hall and a staircase immediately in front. The plan on this page shows the new arrangement. The left-hand wall of the passage was taken away and what had been a room became a useful lounge hall, with the new staircase at the end of it and with exits to the rooms at the back. The space hitherto occupied by the staircase was added to the drawing-room, which communicates with the study in such a way that the two rooms may be converted into one when desired by the occupier. The dining-room opens to the right of the hall (p. 649). Almost the whole of the interior was panelled as part of the scheme for interior decoration. The garden at "Morton House" was in as deplorable a state as the house, but it was transformed into a most agreeable place. With a central fountain and broken-stone paths, it is a retreat to be envied, and though comparatively small it is a good example of a modern walled garden. The plan below shows that it is bounded on one side partly by a dining loggia, facing which, on the other side



Millfield Brentwood.



Morton House, Hatfield.

Morton House, Hatfield: Part of Hall and Dining-Room.

Mr. Winter Rose, Architect.

of the fountain, is a niche containing a statue of St. Etheldreda.

Another house in Hatfield, near "Morton House," is "Goodrich House." On one of our Plates is reproduced Mr. Rose's original design, and the block on p. 650 gives a photographic view of the work as carried out. The spire of Hatfield Church is in the background, a street intervening; and Hatfield House adjoins the property. The work of creating "Goodrich House" was done in association with the owner of the property, Mr. F. W. Speaight, who proved a sympathetic collaborator. As it stands the house reveals, nevertheless, Mr. Winter Rose's own individuality and his artistry will be recognised throughout.

"Cloister Garth" (see Plate), as its name suggests, is distinguished by a covered approach, which gives picturesqueness to the house, and, as it takes the place of the indispensable loggia, is a useful adjunct to the home. This feature largely influenced the design, and the architect arranged it cleverly so that it does not interfere with the lighting or the airiness of the rooms. The building is situated at Purley in Surrey, and, high up on one of the hills, it is a welcome note of restrained workmanship among much that is "ideal." It will be seen that "Cloister Garth" shows a partly tile-hung and partly brick exterior, a combination which, though sometimes unsatisfactory, does not strike a false note if well proportioned, as in the present case. This house is on an estate now being developed on sound lines under the jurisdiction of the owner, Mr. William Wood, and Mr. Winter Rose had the advantage of a congenial site on which to place his building. Among other examples of Mr. Rose's work may be mentioned a farm house at Turvey, near Bedford; alterations to Little Court, Buntingford; and garden schemes at Kensale Manor, Saxmundham; and in connexion with a house at Walberswick, Suffolk. In a house built recently at Marlow for Mr. A. Lys Baldry he departed to some extent from his brick and timber convention and made use of steel and concrete in the construction and details. To Marsh Court, Stockbridge, he added outbuildings consisting of chauffeur's house, garage, etc., in collaboration with Mr. E. L. Lutyens, F.R.I.B.A., whose lead in the original building was followed as a matter of course.

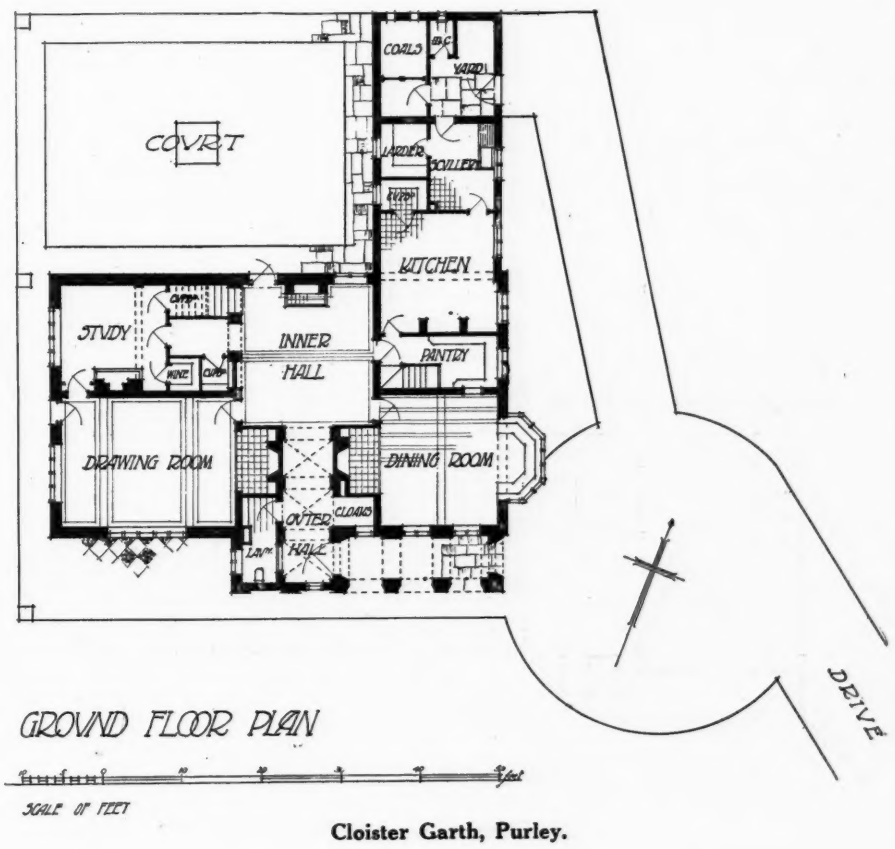
Lately Mr. Winter Rose has been at work on a monumental design for a University, a competition work which for the moment is *sub judice*, but to which we shall refer in due course.

The mention of this and the numerous houses which we have touched upon and in part illustrated are sufficient to show that Mr. Rose is a worker, and, although his piquant fancy and delicate touch have found most opportunity so far for expression in domestic work, his versatility has enabled him to handle ecclesiastical work with marked success.

At the instigation of Miss Tatlock, of Bramfield House, Suffolk, he erected a reredos and altar-table in the Church of St. Andrew, Bramfield, in memory of the donor's grandfather, Peter de Wint. The reredos forms a background to a beautiful rood-screen, and care had to be taken that the new work should combine with the old. Stone of a fine texture, French grey in colour, was chosen for the general architectural work, while for the figures of the four saints included in the design coarser ("Doulting") stone was selected. This was a Gothic excursion, but Mr. Rose carried through the work with taste and judgment, and the result perhaps is more interesting than if the work had been placed in the hands of an architect bound down in temperament and practice to Gothic design.

Enough has been written to show that Mr. Winter Rose in the short time he has been in practice has made his mark and is able to carry out his ideas with common sense and enterprise. His originality has been founded on good English traditions and nothing more praiseworthy could be said. His work so far can only be considered as an introduction to a career of interest to himself and to those who follow the trend of modern architecture. The lessons of book illustration in the "Sixties" seem to have been forgotten, but the impetus given to domestic architecture during the same period has not died out. Mr. Winter Rose is one of the successors of Bodley, Nesfield, Norman Shaw, and Mr. Philip Webb, and with his true instinct for architectural fitness his future seems assured.

It is perhaps no part of our duty to examine the equipment of an architect apart from his office credentials. But F. C. Penrose was no less a personality in our world because he was a rowing Blue, and only a few weeks ago Sir Aston Webb, in welcoming the new President of the Royal Institute of British Architects, referred to Mr. Blomfield's prowess at the wicket and elsewhere. With that official recognition



Cloister Garth, Purley.

Goodrich House, Hatfield.

Mr. Winter Rose, Architect.

of sporting proclivities we have no hesitation in referring to Mr. Winter Rose's devotion to football. For seven years he has been captain of the Ealing Rugby Football Club, and, playing as he has sometimes done for the Eastern Counties, he has won his County Cap. In the field Mr. Rose's place is among the forwards; and it may be fairly anticipated that the lessons of the scrummage will not be forgotten when professional problems call for the exercise of qualities of endurance and of self-sacrifice.

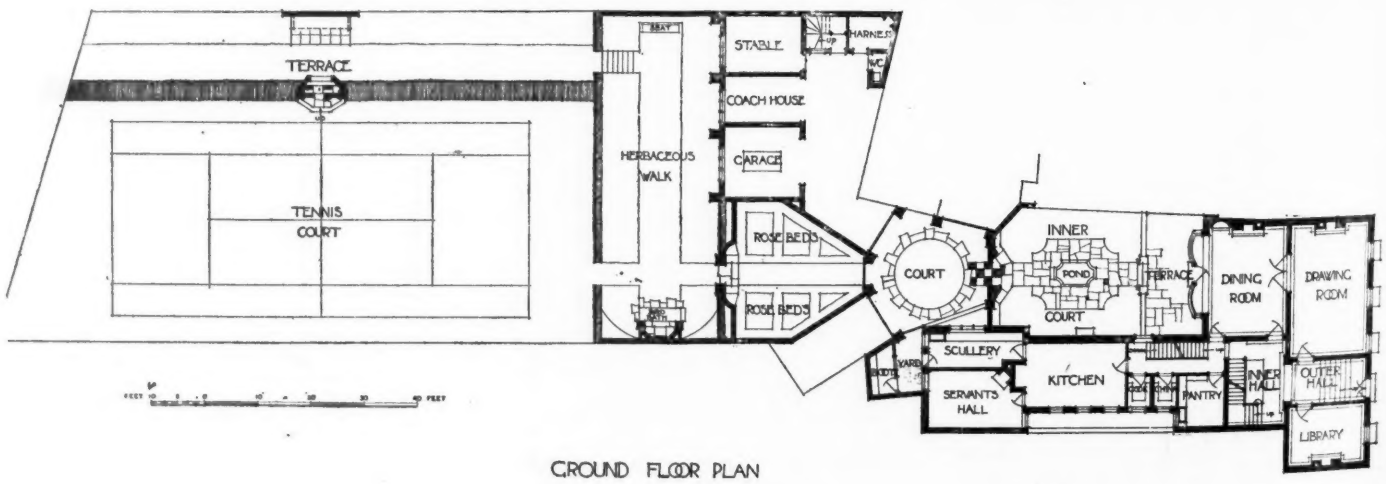
CITY OF LONDON FIRE INQUESTS: THEIR HISTORY, WORKING, AND RESULTS.

ON Tuesday last week Dr. F. J. Waldo addressed by invitation the members of the Insurance Institute of London in the Great Hall, Winchester House, Old Broad-street, E.C. Mr. George E. Mead (of the Sun Insurance Office), President of the Institute, was in the chair. His subject was the History, Working, and Results of the City of London Fire Inquests Act. The office of Coroner, he said, dated from the Norman Conquest, and for a century or so he sat with the Sheriffs and tried all kinds of felonies, but his powers of trial were abolished by Magna Charta in 1215. Amongst his earlier multifarious duties was that of inquiry into non-fatal fires, and this fell into abeyance, according to most authorities, in the fifty-second year of the reign of King Henry III. until the year 1845, when it was revived by the then City Coroner, Mr. Serjeant Payne. During the next six years, without receiving any fees, he held seventy-one fire inquests, of which nine were found to be wilful, thirty-four accidental, and twenty-eight cause unknown. In one case of arson in Southwark conviction was followed by transportation for life. The last of his inquests was held in 1853.

Prior to 1860 Sir John Humphreys, Coroner for Middlesex, held a number of inquiries into non-fatal fires. In 1851, at the instance of the Coroners' Society, similar inquiries were held in various parts of the United Kingdom. Amongst them one conducted by Mr. Coroner Herford, at Manchester, in 1860, was thrown out by the High Court on the score of illegality. After the Herford judgment no more fire inquests were held until the City of London Fire Inquests Act, passed in 1888, conferred on the Coroner wide powers of inquiry into any case of fire reported to him by the police or the Fire Brigade service. The method now in force is for the Coroner and his jury to inspect the burnt premises, together with any officials the jury may wish to consult. The result of the investigations is laid before the Home Secretary and Court of Common Council by the Lord Mayor. Dr. Waldo stated that his predecessor, the late Mr. Langham, held eighty-five fire inquests, while he himself has held fifty-three between 1901 and 1912. During the past five years there has been an average annual decrease of thirty-six fires as against that of the five years immediately preceding the passing of the Act in 1888. Again, in the year 1902 47 per cent. of fires were reported as of unknown origin as against 25 per cent. in 1905. Further, in 1911, out of 145 fires reported, in only twenty-two cases did the cause of the fire finally remain undiscovered Not only that, but the proportion of big and serious fires has also considerably decreased in the City The power to hold fire inquests acted as a deterrent against arson and fraud on the insurance companies, was educational in its effect, and caused people to be more careful with respect to fire in both business and private premises. Altogether the facts seem to favour an extension of the principle of fire inquests to the whole of the United Kingdom, and thereby of restoring to the office of Coroner one of his most valuable and practical public functions.

One instance of the value of systemised fire inquests is the attention that has been called to the special dangers attending the storage of celluloid and other inflammable materials in towns, and the defects of the various Acts of Parliament which deal with construction and safety of buildings in relation to fire.

It is interesting to note that the extension of fire inquests is strongly supported by the Association of Professional Fire Brigade Officers, while Lord Gladstone's Departmental Committee reported in 1909:—"We have come to the conclusion that the system of fire inquests established by the Act of 1888 has worked well in the City of London, and that the benefit of this system ought to be extended to the country at large." On the other hand, the London County Council are for some unaccountable reason averse to the proposal of the Departmental Committee, and think they or the Home Office should decide in which particular cases inquests are to take place, and that a special department should be created and charged with the duty of holding fire inquests in place of the independent Coroner, an officer of trust, and with hands unfettered, and ready to do his duty simply and solely in the public interest as he swore on entering into office.



GROUND FLOOR PLAN

Goodrich House Hatfield.

THE BUILDING TRADE.

THE INCORPORATED INSTITUTE OF DECORATORS: THE DECORATION OF SMALL HOUSES.*

THE small house has from a decorative point of view been neglected, and this is but the result of the condition of things as they exist to-day. Consider the case of a man who occupies a small house in the suburbs which he has perhaps purchased through a building society, and the rental of which is from 30*l.* to 40*l.* a year. He and his wife are anxious to have their house decorated in good taste, but they have no actual knowledge whatever of the subject. . . .

What happens in ninety-nine out of a hundred cases is this. They obtain an estimate from a local "builder, plumber, and decorator," who duly supplies the estimate accompanied with one or more pattern-books of wallpaper upon which they spend hours of anxious thought, although, if they but knew it, there are not in most cases a couple of dozen papers in it which are worthy of being hung in any home occupied by anyone having the slightest pretensions to good taste. Perhaps they decide to use washable water-paints, but in any case their selection is almost certain to be bad. In both cases they are groping in the dark, and, having before them the poorest patterns, must come to a decision practically without taking into consideration the all-important questions of furniture and of pictures, to say nothing of the dimensions of the room, its shape, its aspect, its windows, and the many other conditions which ought to be taken into account under such circumstances. Is it any great wonder, then, that so many small houses are badly decorated? Now there are in London alone many hundreds of thousands of such houses, and, including the country, a vast number in the aggregate, so that it will be acknowledged that there is plenty of work for the Institute to do if means can be found to carry it out on a practical basis. . . .

Proposed Advisory Committee.

My first suggestion relates to wallpapers, because these decorations, if properly designed and selected, possess so many advantages that they will in every probability continue to be popular for centuries to come. They are cheap, convenient, and on the whole sanitary. What influence can be brought to bear with the view of improving the design of all classes of paperhangings, especially those which from their low price are certain to be used in our "small house"? What practical means can be taken to delete the bad designs, or rather to put a stop to their production? My answer is that it can be done by submitting the designs before the blocks are cut to a competent authority, which would only give their approval to those designs which in their opinion possessed the necessary artistic merit or came up to a sufficiently high standard, and I need not remind you that this would by no means necessarily imply an elaborated ornamentation or marked novelty. Such an authority could, I suggest, be set up by the Institute by appointing from among its Fellows an Advisory Committee to pass designs which should from time to time be submitted. As it is well known, public taste in decoration, as in other things, varies considerably in different parts of the country, so that it would probably be found desirable to appoint three such Committees; one in London, another say in Yorkshire, and a third in Scotland. . . .

It is well known that out of every 100 new patterns which are brought out year by year at least twenty, and often more, may be regarded as absolute failures. The cost of cutting the blocks and printing is precisely the same as though the paper had succeeded. Now it is clear that the cost of these failures must be distributed over the cost of those which succeed, hence if the element of risk were lessened a considerable saving would be effected. I take it that at least a number of the members of the Committee would be actual buyers of paperhangings, and if they had passed designs they would, when these designs came on the market, no doubt stock them, hence their success would be assured. Then, again, those designs which were approved will be "hall-marked," so to speak, for the general trade, while many of those rejected would probably never be cut at all.

I am well aware that this scheme would take some years before it had a very marked influence on the wallpaper trade as a whole, but if it were started experimentally with, say, 100 designs to commence with, or even less, I believe it would become a permanent feature. The danger at first would be that only designs of expensive papers might be submitted and efforts should be made to include particularly cheaper varieties. It is, as is well known, the custom to print successful designs of an expensive character in future years on cheaper papers, and this course would doubtless continue to be followed. . . .

I claim with all respect that the builders' merchant is not a competent authority to select wallpaper hangings, which requires the services of a trained decorator. The merchant probably deals in ranges, baths, ironwork, bricks, lime, and timber—in fact, everything which goes to make up a building. How, then, can he be expected to be a judge of wall decorations? It may be said that it is evident that his selection of papers sells or he wouldn't continue to select, and this suggests a point which is often overlooked. A large majority of small houses (in London, for instance) are not owned by those who occupy them, but are rented from the owner often on a three-yearly agreement. The landlord, as he is usually termed, in only too many cases, gets his decorative repairs done as cheaply as possible, and the practice is to have a wallpaper pattern-book sent to the tenant from which to make a selection. Hence this tenant, if even he be capable of choosing well, is greatly hampered in getting a good result by the paucity of even moderately good designs. But he is forced to make his selection from that particular book, and the builders' merchant gets his order and imagines that the designs are quite as they should be. In making this sweep-condemnation of pattern-books I by no means include all merchants. There are in London alone a dozen or more whose business is to select designs of merit, but, as things exist, they sell mostly to the better class of customers. If the tenant were a free agent and could choose his paperhangings where he wished it would certainly lead to a great improvement generally. Even at the best, I believe the merchants would be glad to have the advice and assistance of a jury of practical and trained men such as would be provided by the formation of an Advisory Committee such as I have counselled.

Professional Advice.

I come now to my second suggestion, which, briefly stated, is that the Institute should offer to give through its Fellows, for a suitable fee, professional advice on all matters connected with decoration. Architects and other professional men who accept commissions, including details of special work with which they are not very familiar, seek as a matter of course the assistance of brother professionals who have given it a close study. Thus the architect on occasion consults the engineer, and the general practitioner among medical men the specialist.

But what I have at present in mind is the occupier of the small house who has refined tastes, and who recognises the fact that he needs expert advice if he is to overcome the many difficulties which surround the subject and obtain that which he and his good wife so ardently desire—as artistic a home as his means and circumstances permit. Such a man would be very willing to pay a modest fee of a couple of guineas or so to a competent gentleman, who would come down, see the house, the pictures, carpets, and furniture, and on the spot make a selection of wall hangings or choose the colours for the painted work, or for the walls of those rooms which were to be distempered, and leave the whole "cut and dried," to be carried out by the local house painter who, having a safe guide all mapped out, could proceed without difficulty.

A half a day or a little more would be amply sufficient time in which to do such work, and at least some of the selections would answer in other places. A class of clients who would be very likely indeed to avail themselves of such assistance would be the speculative builder, who puts up houses in rows from an architect's designs, but who is often foolish enough to attend to the decoration himself, probably with the aid of some "job lots" of wallpaper he has purchased at a bargain. If he realised how very greatly a good scheme of decoration assists in attracting a tenant or customer—and many builders do realise this to an extent—he would be far from begrudging the few guineas it would cost him to obtain sound advice when he wanted it. . . .

Art Schools.

I approach the third and concluding part of my subject with some diffidence because I realise that there are many difficulties to overcome, not, however, that I believe them to be insurmountable. My suggestion here is that the Institute should endeavour to identify itself more closely with the art schools of the country so far as decorative art is concerned with the view of raising the standard of public taste, including that of the occupiers of small houses, and of producing more practical utility than is the case to-day.

It will, I trust, be fully understood that I have no desire to make an attack on art schools generally, but I venture to assert that the actual practical results fall lamentably short of that which might be expected and are far from being commensurate with the expenditure. Leaving out of the question the work done at South Kensington and at some of the art schools in the principal great cities, the instruction frequently given is, in my experience, only very partially directed toward practical ends, and the students are mostly young ladies who wish to fill in their time with a little fancy designing, a little dabbling in oil and water-colour painting. The men and women who wish to acquire knowledge by which they will earn their livelihood have but little to encourage them. I am well aware that in small art schools the funds available will not permit of the employment of a sufficiently large staff of instructors. I need hardly remind you that it is absolutely essential in teaching all branches of applied art that the instructor be practically acquainted with the industry in which the art is to be employed. Thus the teacher of design for metal-work must be acquainted with the characteristics of the metals in which the designs are to be carried out. Indeed it is not too much to say that he should have actually worked at the trade to some extent. In designing wallpapers it is clearly very necessary to take into consideration the question of repeat and many other practical matters relating to the printing of the papers. Many designs produced by art school students are useless because of this want of knowledge. . . .

A serious and common defect in such designs arises from the fact that the instructor is not a practical man, in this instance is not a practical decorator. This defect is that the designer is far too apt to make the pattern pretty in itself, apparently forgetting that the small piece forms but a very little part of the surface of the wall on which it is to be used; in other words, that the piece will look vastly different when it is repeated many times on a wall expanse measuring at least several yards in width and two in height. The only way, to my mind, to design a paperhanging is to draw the ornamentation for the whole wall of average size and then to cut out a portion of it which may be used as the pattern. Details which may appear coarse in the piece will often look commendably bold in the mass; and details that are delicate and refined in the piece are not infrequently either lost altogether in the mass or have only the appearance of being weak and finicky.

To introduce into art schools a more practical plan of operations would be work well done. And I suggest that this Institute could do it through Committees and on a similar plan to that followed by many of the Master Painters' Association in connexion with the teaching of painters' work. . . .

*Part of a paper read before the Incorporated Institute of Decorators at the Painter-Stainers Hall, London, E.C., on November 25, by Mr. Arthur Seymour Jennings, F.I.B.D.

What is wanted is to do away with the idea which unfortunately prevails so largely among art teachers, that to put art on a commercial basis degrades it. It does nothing of the kind, it popularises it; it brings it within the reach of the masses, of the owner and occupier of the small house, and on that account I earnestly believe deserves the closest attention and the most active assistance which this Institute can give it.

LONDON MASTER BUILDERS' ASSOCIATION.

A MEETING of the Council was held on Thursday, the 21st inst. at Koh-i-Noor House, Kingsway, W.C., the chair being occupied by Mr. James S. Holliday, President.

The Law and Parliamentary Committee's Report on legal cases and matters connected with the National Insurance Act was received and adopted.

The Report of the Conciliation Board was read and approved.

Correspondence relating to trade matters was considered.

Mr. H. C. Horswill, Forest Gate, was elected an ordinary member, and Mr. A. George's nomination as an Associate member was accepted.

LONDON ASSOCIATION OF MASTER DECORATORS.

A MEETING of the General Committee of the London Association of Master Decorators was held at 92, Queen Victoria-street, London, E.C., on November 11.

In view of the fact that a Chairman of Committee had not been appointed it was agreed that the President, Mr. J. Anderson, should temporarily take the chair.

On the motion of Mr. De Jong, seconded by Mr. Wilkinson, it was unanimously resolved that Mr. Rowden, of Messrs. Rawlings Brothers, Ltd., be elected Chairman of the Committee.

The Chair was then vacated by Mr. Anderson and taken by Mr. Rowden.

The Chairman said the next item on the agenda was the London County Council educational question; to arrange for the Educational Committee to take up the matter in accordance with the resolution of the last general meeting.

Mr. Anderson moved that the Secretary be instructed to call a meeting of the Educational Committee to proceed in the matter. The resolution was unanimously adopted.

The next item on the agenda was Rules for Foremen, and the Committee proceeded to consider in detail each of the suggestions offered.

Mr. Anderson pointed out that it was thought necessary to bring home to men who took charge of jobs that they had an important position to fill, and unless they fulfilled the duties they ought not to consider themselves entitled to any extra remuneration. A good many men thought they ought to have extra pay simply because they were looked upon as foremen. It was just as well they should know that if they accepted the position they must also accept the conditions imposed.

A long discussion ensued, and it was eventually agreed that the rules as adopted should be printed and circulated amongst the members.

The next item on the agenda was further to consider obtaining new members and to carry out the resolution of the general meeting, and after careful consideration it was agreed to refer the subject to a Special Committee to carry out the suggestions adopted.

BIRMINGHAM BUILDING TRADES EMPLOYERS' ASSOCIATION.

THE annual dinner of the Birmingham Building Trades Employers' Association was held at the Grand Hotel on the 12th inst., Mr. William Moffat presiding. The guests numbered about 200.

Mr. Neville Chamberlain proposed the toast of "Greater Birmingham, our Beloved City." He said there was one thing they had constantly borne in mind in the two schemes that were now waiting the approval of the Local Government Board. They had felt all along that their position in town planning Greater Birmingham was different altogether from that of a philanthropist who planned his own estate and who, as well as a town planner, was also his own owner, financier, and builder. It was not likely that in his capacity of town planner he was going to offend or frighten himself in any other of his capacities, but they had not such a simple problem as that to deal with. They had to deal with the great and open market; they had to recognise they were making a great experiment, and therefore that they had to exercise the greatest caution lest they should defeat their own ends and stop development by putting too many restrictions upon the builder. They had therefore to endeavour, in drawing up schemes, to make them as broad and elastic as possible, deliberately avoiding putting on restrictions suggested to them, some of which seemed desirable in themselves, because they thought they might unduly alarm some of their friends in the building or other trades concerned. It was their anxiety to work hand-in-hand with those who were interested in their new possessions. He himself would gladly wait now for a little time, even for a year or two, to see how their two schemes worked out before doing any more. But then he could not be sure they (the builders) were going to wait. They in the Town Planning Committee found it necessary to go on pegging out their claims until they had got some control over the whole of Greater Birmingham, because they were afraid if they waited to obtain further experience when they came to town plan they would find all the development had taken place.

The Lord Mayor (Councillor Ernest Martineau), in response, said it was a very heavy thing for a man without much previous experience in the laying-out of estates and in all that went to the development of the vast property that constituted Birmingham suddenly to undertake and carry out the gigantic schemes that were in front of them; but they knew they had there a man who had the courage to face anything, who had great ability and fair-mindedness, and he would not shirk the work.

The toast of "The Makers and Builders of Modern Birmingham" was honoured on the proposal of Mr. S. E. Short, supported by Mr. A. S. Smith.

Mr. James Wright (President of the National Federation) proposed "The Birmingham Building Trades Federation Association." Mr. Moffatt responded.

GLASGOW BUILDING TRADES EMPLOYERS' COUNCIL.

A MEETING of the Glasgow and West of Scotland Building Trades Employers' Council was held on the 18th inst. in the Secretary's Office, 204, St. Vincent-street, Glasgow. Mr. William H. Baxter, Chairman of the Council, occupied the chair. The Secretary reported regarding the negotiations which had passed since last meeting with the Institute of Measurers as to the alterations on the conditions of building contracts. The report was to the effect that, with the exception of one of the conditions, the Institute of Measurers had agreed to the conditions submitted by the Council. After some discussion it was agreed to submit an amended proposal to the Institute of Measurers in lieu of the condition objected to by them. A report was submitted from several of the affiliated associations regarding the proposal made by the Board of Trade under the National Insurance Act, in virtue of which the Board of Trade would undertake on behalf of employers the custody, stamping, distribution, and exchanging of contribution cards and unemployment books. After consideration it was agreed in the meantime not to adopt the proposal of the Board of Trade, as the Council were of opinion that the arrangements at present in force had not had a fair trial. The Secretary, in referring to a communication sent to the Town Clerk strongly opposing the Corporation adopting the single-contractor method of executing the addition to the Municipal Buildings, explained that he had received a letter from the Town Clerk stating that the matter would be brought before the Buildings Committee, when the question of preparing the necessary specifications and schedules came to be considered. A proposal to have a meeting of the members of the various associations affiliated with the Council was discussed, and it was agreed that a meeting should be held in February, at which the annual Report of the Council would be submitted for consideration and any matters of general interest to the building trade brought up for discussion.

MEMORIAL WINDOW, BRADFORD.

A stained-glass memorial window in memory of Mary, wife of Mr. Joseph Whittingham, has been unveiled in St. John's Wesleyan Church, Bradford. The subject is "The Widow's Mite," which has been effectively introduced into a two-light opening by Mr. C. E. Steel, of Leeds.

GOVERNMENT CONTRACTS.

THE following tenders have been accepted during the past month by the Government Departments named:—*Admiralty, Works Department:* Works services: Erection of Wireless Telegraphy Station at Stockton-on-Tees—Mr. T. Pearson, 28, King-street, Spennymoor; erection of additional house, etc., at Wireless Telegraphy Station, Cleethorpes — Messrs. Quibell, Son, & Greenwood, Ltd., Sculcoates-lane, Hull; tanks for storage of Broxburn oil, Medway—Messrs. Newton, Chambers, & Co., Ltd., Thorncliffe Ironworks, near Sheffield. *War Office:* Sanitary appliances (running contract)—Messrs. J. Tylor & Sons, Ltd., Belle Isle, York-road, N.; Works services: alterations, etc., to married quarters, Tidworth Barracks—Mr. J. Cockerell, Tidworth; erection of barrack block, Hilsea—South Western Building and Steam Joinery Company, Ltd., Gosport; erection of barrack huts for Army Service Corps, Napier Lines, Colchester—Mr. W. Chambers, 101, Magdalen-street, Colchester; erection of bath-house and formation of ducts for heating pipes, Tidworth —Messrs. Wakeham Brothers, Friary-yard, Knighton-road, Plymouth; erection of drill shed, Glasgow—Mr. James Brown, Cairncross, Bothwell; erection of drill shed, Fort George —Mr. P. Young, Glencoe, Ardesier; erection of drill shed, Inverness—Mr. J. Raitt, 9, George-street, Montrose; erection of married quarters, Curragh Camp—Messrs. H. Laverty & Sons, Ltd., 12, Cambridge-road, Belfast; erection of new guard-house, etc., and alterations to barrack block, Castle Park Barracks, Dunbar—Messrs. W. Cruikshank & Son, Lower Gilmour-place, Edinburgh; erection of offices, Royal Dockyard, Woolwich—Messrs. W. F. Blay, Ltd., Spital-street, Dartford; erection of sanitary annexes, Norton Barracks, Worcester—Mr. R. M. Hughes, 16, Bartholomew-road, N.W.; improvements to Ballyfair House —Mr. T. O'Mahony, Sunmount, Fermoy; improvements to sergeants' mess, Taunton—Messrs. G. Pollard & Co., Taunton; periodical works services at Pembroke Dock—Mr. D. E. Hutton, 7, Briggate, Shipley; York—Messrs. T. M. Oxtoby & Son, 5, Fishergate, York; reconstruction of eastern half of old college, Sandhurst—Messrs. Turner & Kersley, Blackwater, Hants; repair and maintenance of War Department buildings at Barnard Castle—Messrs. J. Kyle & Son, Barnard Castle; Hartlepool—Mr. G. H. Lee, 42, Northgate-street, Hartlepool; supply and erection of huts, Central Flying School, Upavon—Messrs. F. Smith & Co., Carpenters-road, Stratford, E. *Crown Agents for the Colonies:* Steel bridgework—Messrs. John Butler & Co., Ltd, Stanningley Ironworks, near Leeds; the Horsehay Company, Ltd., Horsehay, R.S.O., Salop; Messrs. J. Westwood & Co., Ltd., Napier-yard, Millwall, E.; buildings—Messrs. Humphreys, Ltd., 187, Knightsbridge, S.W.; cement —Associated Portland Cement Manufacturers, Ltd., 8, Lloyds-avenue, E.C.; British Portland Cement Manufacturers, Ltd., 4, Lloyds-avenue, E.C.; Messrs. Martin, Earle, & Co., Ltd., 139, Queen Victoria-street, E.C. *Office of Works:* Building works: adaptation, Bethnal Green Labour Exchange—Mr. F. W. Loasby, 274, Hither Green-lane, Lewisham, S.E.; construction of subways, Birmingham Telegraph Stores—Messrs. R. Fenwick, Ltd., William Edward-street, Birmingham; enlargement, Brentwood Post Office—Mr. D. Robinson, jun., Lower-street, Wanstead, Essex; redrainage of white wing, British Museum—Messrs. Leslie & Co., Ltd., Kensington-square, W.; erection, Greenwich Telephone Exchange—Mr. H. Hann, 13, High-street, Collier's Wood, Merton, S.W.; ordinary works and repairs, Hendon, Cricklewood, and Mill Hill—Mr. W. Tout, Brent-street, Hendon; fireproofing, Hertford House—Messrs. Dove Brothers, Ltd., Studd-street, Islington, N.; roofs over waiting spaces, Liverpool Docks Labour Exchange—Messrs. Brown & Backhouse, Chatham-street, Liverpool; alterations, Manchester County Court—Messrs. J. Bland & Son, Ltd., Blackfriars-road, Salford, Manchester; erection new sorting office, Perth—Messrs. Beat Brothers, 65, Canal-street, Perth; ordinary works and repairs at Plymouth—Mr. A. R. Debnam, Mount Pleasant, Plymouth; Reading—Messrs. G. S. Lewis & Brother, Castle-street, Reading; alterations, Stirling Post Office—Mr. W. McPherson, 32, Forth-street, Stirling; erection new post-office, Wick—Mr. A. Hall, 21, Mid Stockitt-road, Aberdeen; steel sashes, Victoria Telephone Exchange—Messrs. Humphries, Jackson, & Ambler, Ltd., 34 and 35, Norfolk-street, Strand, W.C. *General Post Office:* Laying lines of Sykes ducts, London-Canterbury, sect. 1—Mr. G. J. Anderson, 26, Lower North-street, Poplar; sect. 2—Messrs. J. Mowlem & Co., Ltd, Grosvenor Wharf, Westminster, S.W.; sect. 4—Messrs. W. Griffiths & Co., Ltd., 35-39, Hamilton House, Bishopsgate, E.C.; sect. 5—Messrs. Airds, Ltd., 22, Queen

Anne's-gate, S.W.; London-Uxbridge-Slough—Messrs. J. Mowlem & Co., Ltd., Grosvenor Wharf, Westminster, S.W.; London-Weybridge-Guildford, sect. 1—Messrs. Clough, Smith, & Co., Ltd., Spencer House, South-place, E.C.; Romford-Chelmsford—Messrs. W. Griffiths & Co., Ltd., 35-39, Hamilton House, Bishopsgate, E.C.; laying lines of pipes and sykes ducts, Balham—Mr. J. A. Ewart, 21, Old Queen-street, S.W.; laying lines of pipes, Todmorden—Messrs. Etheridge & Leach, Moss Bank, Cheetham Hill, Manchester. *Metropolitan Police:* Erection of Arlington-road Section House—Messrs. J. Jarvis & Sons, 253 and 255, Hackney-road, N.E.; erection of section house at Ealing—Mr. W. J. Dickins, 19, Broadway, Ealing, W.; erection of temporary police-court at Francis-street, Tottenham Court-road—Mr. W. Harbrow, South Bermondsey Station, S.E.; reconstruction of King's Cross-road Police-station — Messrs. Higgs & Hill, Crown Works, South Lambeth-road, S.E. *Commissioners of Public Works, Ireland:* Building works and supplies, Dublin District—Messrs. J. & P. Good, Ltd., Great Brunswick-street, Dublin; erection of Metropolitan Police Barracks, Great Brunswick-street, Dublin—Messrs. J. & R. Thompson, Ltd., Phillipsburgh-avenue, Fairview, Dublin; erection of Laurence Cove Coastguard-Station, Co. Cork—Messrs. A. Hull & Co., Ringsend-road, Dublin; erection of coastguard-station, Mouth-of-the-Boyne, Co. Louth—Messrs. S. Henly & Sons, Fair-street, Drogheda; erection of Tuam Post Office, Co. Galway—Messrs. J. Ryan & Son, 34, Thomas-street, Limerick; painting and glazing works and supplies, Dublin District—Messrs. T. Dochrell, Sons, & Co., Ltd., South Great George-street, Dublin; building works: alterations to National Health Insurance Commission, 44 and 45, Merrion-square, Dublin—Mr. T. Farquharson, 69, Jones's-road, Dublin; erection, Pollathomas National School, Co. Mayo—Mr. J. Dempsey, Belmullet; engineering works: dock extension and quay improvements, Portstewart Harbour—Messrs. Martin & Co., Charlestown House, Drogheda.

GENERAL BUILDING NEWS.

DRILL HALL, EDINBURGH.

New premises have been erected in M'Donald-road for the Lowland City of Edinburgh Royal Garrison Artillery, from the designs of Mr. T. Duncan Rhind, A.R.I.B.A. The drill hall is 115 ft. by 38 ft., and the roof is carried on steel principals. The building also contains rooms for the officers, orderly-room, recreation-rooms, concert hall, etc. The opening of the premises took place on the 16th inst.

TRADE NEWS.

Under the direction of Mr. J. V. Johnston, Lic.R.I.B.A., Londonderry, Boyle's latest patent "air-pump" ventilators have been applied to Picture House, Londonderry.

The Limmer Asphalte Paving Company's Lithofalt paving blocks are to be laid in the Quadrangle, Buckingham Palace.

The new billiard hall and picture theatre, Fleetwood, is being ventilated by means of Shorland's patent exhaust roof ventilators, supplied by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

BRITISH AND FOREIGN TENDERS.

A letter has been addressed to the various Metropolitan Borough Councils, embodying the following resolution passed by the Council of the Union Jack Industries League:—"The Council of the Union Jack Industries League respectfully urge the Metropolitan Borough Councils to pass a resolution instructing their Committees to accept, wherever possible, British in preference to foreign tenders for contract purposes; the continuation of such a policy being a direct encouragement to British labour and a patriotic example on the part of public bodies to private individuals to support home in preference to foreign industries." The letter proceeds:—"A similar resolution to this was forwarded to all the Metropolitan Borough Councils last year, and, in most instances, adopted by those Councils. May I take advantage of this opportunity to say that complaints have recently reached me from manufacturers supplying the building trade of the alarming increase in the importation of foreign materials affecting this trade, and to ask your Council to bring the subject before their Committee having charge of passing plans and specifications in connexion with the building trade?"

KING'S COLLEGE HOSPITAL.

We are asked to state that Messrs. Doulton & Co., Ltd., are supplying the sanitary fittings to the King's College Hospital, and that these comprise many new designs and important improvements.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

AT Tuesday's meeting of the London County Council the following applications under the London Building Act were dealt with. (The names of the applicants are given in parentheses):—

Lines of Frontage and Projections.

Chelsea.—Erection of a church building upon a site on the north-eastern side of Park-walk, Chelsea, abutting also upon the north-western side of Camera-square (Sir Arthur Blomfield & Sons).—Consent.

Holborn.—Illuminated sign at the Fisher-street substation of the Metropolitan Electric Supply Company, Ltd., Fisher-street, Holborn (Mr. E. Cunliffe Owen).—Consent.

Islington, East.—Erection of a building upon a site between No. 2, Blackstock-road and the "Blackstock" public-house, Blackstock-road, Seven Sisters-road (Mr. H. A. Saul for Miss Farmer).—Consent.

Kennington.—Building on the north-western side of Kennington Park-road, Kennington, upon the site of Nos. 2, 2A, 4, and 6 (Messrs. Walter Jones & Sons for the Commercial Car Hirers, Ltd.).—Refused.

Marylebone, West.—Erection of an addition at No. 2, Melina-place, St. John's Wood (Mr. H. W. Binns for Dr. G. A. Gunton).—Consent.

St. George, Hanover-square.—Wood and glass enclosures to the porch at No. 77, Eaton-square (Mr. J. A. Minty).—Consent.

St. George, Hanover-square.—Erection of a roller shutter box at No. 15, Waverton-street, Hill-street, Mayfair (Messrs. Haywood Brothers for Mr. E. G. Raphael).—Consent.

Strand.†—Illuminated sign in front of No. 38, Greek-street, Soho (Messrs. Kettner's, Ltd.).—Consent.

Width of Way.

Kennington.—Re-erection of the "Engineers' Arms" beerhouse, No. 108, Wandsworth-road (Mr. A. Dixon for Messrs. Whitbread & Co., Ltd.).—Consent.

Kensington, South.—Retention of a studio building at the rear of No. 17, Pembroke-square, Kensington, with a forecourt boundary (Mr. S. Newcombe for Mr. R. J. Barrett).—Consent.

Kensington, South.—Erection of a greenhouse at Hill Lodge, Hillsleigh-road, Kensington (Messrs. W. Cooper, Ltd.).—Consent.

Width of Way and Lines of Frontage.

Holborn.—Retention of an illuminated sign at the Tower-street substation of the Metropolitan Electric Supply Company, Ltd., abutting upon West-street, Holborn (Mr. E. Cunliffe Owen).—Consent.

Holborn.—Advertisement hoarding at No. 116, New Oxford-street, Holborn (Messrs. H. & F. Worrow for Cleaver's Emporium, Ltd.).—Refused.

St. Pancras, South.—Erection of projecting steps and landing in front of the new chemistry building, University College, Gower-place, St. Pancras (Professor F. M. Simpson for the Committee of the University of London).—Consent.

Lines of Frontage and Construction.

Chelsea.—Showcase at No. 15, Sloane-street, Chelsea (Messrs. Charles Spreckley & Co., Ltd.).—Refused.

Clapham.—Temporary wood, iron, and canvas pent on the forecourt of No. 28, Northcote-road, Battersea, abutting upon Cairns-road (Mr. C. W. Hall).—Consent.

Lewisham.†—Temporary wooden building in front of No. 11, Aitken-road, Catford (Mr. W. J. Ball).—Consent.

Width of Way and Construction.

Greenwich.—Two temporary wooden sheds at premises, No. 66, Deptford-green, Greenwich (Cheap Wood Company).—Consent.

Islington, South.—Temporary watchman's box at the entrance to the yard of Bean's Express, Ltd., on the western side of Nelson-terrace, City-road, Islington (Mr. H. C. Flack for Bean's Express, Ltd.).—Consent.

Kensington, South.—Erection of a potting-shed of a temporary character in the grounds of No. 1, Holland-park, Kensington (Mr. H. W. Currey for Mr. W. F. Fladgate)—Consent.

St. George.—Temporary wood and iron building at the rear of No. 76, Umberston-street, St. George-in-the-East (Mr. W. J. Fitt).—Consent.

Southwark, West. — Two additional iron sheds at the premises of Messrs. J. Spicer & Sons, Redcross-street and Union-street, Southwark (Mr. R. Plumbe for Messrs. J. Spicer & Sons).—Consent.

Wandsworth.—Temporary concrete building at Princes Wharf, Jew's-road, Wandsworth (Muribloc (Partition Slabs), Ltd.).—Consent.

Wandsworth.†—Erection of an addition to an existing temporary building, and the erection of a further temporary building upon a site on the western side of Putney Bridge-road, Wandsworth (Mr. W. J. Harris).—Refused.

Whitechapel.—Temporary wood and iron building upon a site on the southern side of Great Prescot-street, Whitechapel (Mr. E. W. Chicken).—Consent.

Space at Rear.

Chelsea.—Erection of a building with an irregular open space at the rear upon a site abutting upon King's-road and Flood-street, Chelsea (Temperance Billiard Halls, Ltd.).—Consent.

Hammersmith.—Erection of buildings upon the site of Nos. 156 and 158, King-street, Hammersmith, with an irregular open space at the rear of one of such buildings (Messrs. J. S. Quilter & Son for Messrs. Battley, Sons, & Holmes).—Consent.

Hampstead.—Erection of an additional story over a portion of Norfolk-mansions, Lithos-road, Hampstead (Mr. G. E. Ellis for Mrs. M. A. Ellis).—Consent.

Kensington, South.—Erection of an additional story at No. 1, Astwood-mews, South Kensington (Mr. A. W. Rose for Mr. G. Petrie).—Refused.

Cubical Extent.

Camberwell, North.—Additional cubical extent in respect of alterations and additions at the premises of Messrs. T. Tilling, Ltd., Acorn-street, Camberwell (Messrs. Gilbert & Constanduros for Messrs. Thomas Tilling, Ltd.).—Consent.

Kensington, North.—Erection at the premises of the Pall Mall Depository Company, Ltd., Barlby-road, Kensington, of an extension exceeding 250,000 cubic ft. in extent (Mr. W. G. Hunt for the Pall Mall Depository Company, Ltd.).—Consent.

Kensington, South.—Additional cubical extent in respect of the conversion of the second floors of blocks 1 and 2 of Harrods' Stores, Ltd., Brompton-road, Kensington, for trade purposes (Mr. C. W. Stephens for Harrods' Stores, Ltd.).—Consent.

Paddington, South.—At the premises of Messrs. W. Whiteley, Ltd., Queen's-road, Bayswater, the construction of the corridors and lifts between the old and new buildings, the provision of doors of special construction in lieu of double iron doors to openings in the division wall between the new building and the adjoining old buildings, Nos. 147 and 149, Queen's-road, erection of an extension of the third story of No. 157, Queen's-road, the erection of kitchen and restaurant additions at the fourth-floor level of the new building, the erection of a roof garden on the roof of the new building, the erection of a photographic studio (fourth story) over No. 149, Queen's-road (Messrs. John Belcher, R.A., and J. J. Joass).—Consent.

Rotherhithe.—Additional cubical extent in respect of a proposed addition to the premises of Messrs. Champion & Slee, Ltd., Church-street, Tower Bridge-road (Mr. J. M. Kennard of Messrs. Champion & Slee, Ltd., Church-

Westminster.—Additional cubical extent in respect of additions at blocks F and G of the Army and Navy Co-operative Society, Ltd., Victoria-street and Howick-place, Westminster (Mr. W. J. Falkiner for the Army and Navy Co-operative Society, Ltd.).—Consent.

Formation of Streets.

Brixton.—Formation or laying-out of two new streets for carriage traffic between Brixton-hill and Acre-lane, Brixton (Mr. H. B. Michell for the British Land Company, Ltd.).—Consent.

Alteration of Buildings.

Chelsea.—Erection of a studio addition on a flat roof at St. Loo-mansions, St. Loo-avenue, Chelsea (Mr. A. Roberts for the Chelsea Electricity Supply Company, Ltd.).—Consent.

City of London.—Smoke-pipe to a steam-boiler at No. 9, Lime-street, City (Messrs. J. Boulting & Sons for J. P. Restaurants, Ltd.).—Consent.

Width of Way, Line of Frontage, and Construction.

Rotherhithe.—Erection of external steel and concrete gangways to unite Nos. 137, 139, and 139A, with Nos. 170, 172, and 174, Rotherhithe-street, Rotherhithe, over the public way of Rotherhithe-street (Messrs. J. Shelbourne & Co. for Messrs. Fisher's Wharves and Granaries, Ltd.).—Refused.

The recommendations marked † are contrary to the views of the Metropolitan Borough Councils concerned.

PROJECTED NEW BUILDINGS IN THE PROVINCES.*

BALBY.—One hundred and twenty-four houses at Balby and Carr House (25,991*l.*); Mr. A. Thomson, builder, care of the Clerk, Town Hall, Doncaster.

Banbury.—Forty houses (6,572*l.*); Messrs. Bosworth & Lowe, builders, Ashley-street, Nottingham.

Barnard Castle. — Territorial drill hall; Messrs. Wright & Chapman, architects, Newcastle; Messrs. R. Wilson & Sons, builders, 1, Victoria-terrace, Barnard Castle.

Batley.—Conversion of houses into offices for Messrs. R. Talbot & Sons, woollen manufacturers, Bullrush Mills, Bradford-road, Batley.

Bellevue.—Proposed school (54,000*l.*) for the Edinburgh School Board.

Blackpool.—Alterations to bath (10,000*l.*): Mr. John Shanks Brodie, Surveyor, Town Hall, Blackpool.

Blakenhall.—Proposed bath: Mr. G. Green, Surveyor, Town Hall, Blakenhall.

Bolton.—Institute, Bridgman-place (6,000*l.*) for the Lancashire and Cheshire Miners' Federation.

Bowdon.—Proposed hall: Vicar, Parish Church, Bowdon.

Brighouse.—Premises, Thornhill Briggs, for the Co-operative Society.

Carnarvon.—Housing scheme, Bethel-road and St. Helen's-area; Mr. E. Hall, Surveyor, Town Hall, Carnarvon.

Chalvey. — Buildings at pumping-station (507*l.*); Mr. W. Street, builder, Slough.

Clayton-le-Moors. — Church; Vicar, All Saints' Church, Clayton.

Cleckheaton.—Extensions to Mount View Leather Works, for Messrs. H. F. Cockrill & Sons.

Colwall.—Houses; Surveyor, Parish Council Offices, Colwall.

Cornwall. — Sanatorium (10,500*l.*); Messrs. S. W. Jenkin & A. E. Brookes, Surveyors, County Hall, Bodmin.

Crewe.—Church (6,000*l.*); Vicar, St. Paul's Church, Earle-street.

Dartford.—Additions at workhouse infirmary (576*l.*); Mr. J. C. Hayward, Clerk, Guardians' Offices, Dartford.

Dartmouth.—Proposed isolation hospital; Surveyor, Town Hall, Dartmouth.

Devon. — Schools, Brixham (2,142*l.*) and Umberleigh (1,367*l.*); Mr. F. J. Badcock, builder, Hazeldene-yard, Ashburton, Devon.

Dewsbury.—Parochial hall (800*l.*); Vicar, St. John's Church, Dewsbury Moor.

Dover.—Extensions to bank, Market-square, for the London County and Westminster Bank, head offices, 41, Lothbury, E.C.

Dumfries.—Housing scheme, King-street (8,000*l.*); Mr. F. Armstrong, Surveyor, Town Hall, Dumfries.

Edinburgh.—Labour Exchange, corner of Riego-street, Lauriston-place, Tollcross (8,001*l.*); His Majesty's Office of Works, Storey's-gate, Westminster, S.W.

Elland.—Cinematograph theatre, Coronation-street, for Central Pictures (Elland), Ltd.

Falkirk.—Billiard-room, Meeks-road (400*l.*), for Messrs. Train & McIntyre, Ltd., whisky merchants, 60, Wellington-street, Glasgow.

Fleckney (Leicester).—Extensions to factory for Messrs. R. Walker & Sons, hosiery manufacturers.

Fleet.—School (200 places); Mr. W. Bailey, Town Hall, Winchester.

Gedney Drove End (Lincs).—Eight houses (1,390*l.*); Mr. W. H. H. Davies, architect, York-row, Wisbech; Messrs. Wilkinson & Co., builders, Elm, Wisbech.

Heigham.—Alterations to St. Phillip's Church School and new school, Dereham-road (448 places); Messrs. H. Ramage & D. O. Holmes, Education Offices, Norwich.

Horden.—Police-station; Mr. W. Crozier, Architect, County Hall, Durham.

Hull.—Hall, etc. (2,250*l.*): Rev. A. C. Carter, Pastor, East Park Baptist Church, Hull.

King's Lynn.—Extensions to baths (1,000*l.*); Mr. J. H. Webb, Surveyor, Town Hall, King's Lynn.

Langholm.—Weaving shed and office, Factory Entry, for Messrs. Reid & Taylor, woollen manufacturers, Langholm Mills, Langholm.

Leeds.—School (5,000*l.*); Trustees, St. Francis Roman Catholic Church, Holbeck, Leeds. Swimming-baths, houses, chimney to laundry, etc. (2,665*l.*); Messrs. H. Atkinson, Ltd., 2, Carlton-street, Leeds.

Leigh-on-Sea.—Addition to St. Clement's Church; Rev. R. S. King, Vicar.

Lewes.—Sanatorium (19,959*l.*); Mr. F. J. Wood, Surveyor, County Hall, Lewes.

Lincoln.—Proposed infirmary; Mr. W. B. Danby, Clerk, Guardians' Offices, Lincoln.

Loughborough.—Destructor house (720*l.*); Mr. A. Faulks, builder, 4 and 5, Sparrow-hill, Loughborough.

Maidstone.—School, Tonbridge-road (1,786*l.*); Messrs. Martin & Newman, builders, Curzon-road.

Milnrow.—Theatre for the Milnrow Empire, Ltd.

Mold.—Proposed restoration of Mold Church (8,000*l.*); Rev. E. Jones, The Vicarage, Mold.

Monmouthshire.—Cookery centre, Blaenavon, and school, Cwmffrwdoer; Mr. T. G. James, County Education Offices, Newport.

Newbridge (Mon).—Twenty houses for the Bryn Building Club (258*l.* each); Messrs. Jenkins, James, & Co., architects, Newbridge; Mr. G. Smith, builder, Ynysddu, Mon.

Ossett.—Extensions at Highfield Mills for Messrs. W. Walker & Sons, Ltd., woollen and worsted yarn spinners, dyers, etc.

Pendlebury.—Alterations to offices for the Worsley Brewery Company, Ltd., Bolton-road, Pendlebury.

Penzance.—Forty houses, Weeth's Field, adjoining Alverton; Mr. F. Latham, Surveyor, Town Hall, Penzance.

Prestwick.—Additions to school, High-street, for the School Board.

Ramsbottom.—Buildings for the Bradford Dyers' Association, Ltd., 39, Well-street, Bradford.

Redditch.—Proposed cinematograph theatre, Alcester-street, for Mr. C. H. Baines, of London.

Rochdale. — Headquarters for Prudential Assurance Company, Holborn Bars, E.C.

Roscrea.—Fourteen houses, Moneygall, and twenty houses, Shinrone; Surveyor, No. 2, Rural District Council Offices, Roscrea.

Rushden.—Additions at factory, Cromwell-road, for Messrs. W. Green & Son, boot and shoe manufacturers, Queen-street, Rushden. Additions to factory, Manton-road, for Mr. W. Knight. Two houses, Wellingborough-road; Mr. William Backwood, builder, 80, Newton-road, Rushden. Alterations and additions to Palace Theatre for Messrs. Cave Brothers. Additions to factory, Rectory-road, for the Central Machinery Company.

Saltburn-by-the-Sea. — Manual institution centre (515*l.*); Mr. J. Hutton, builder, Saltburn.

Sandwich.—Extensions to Guildhall (1,126*l.*); Messrs. Turner & Watts, builders, Cattle Market, Sandwich.

Selby.—One hundred houses, Flixby-road and Armoury-lane; Mr. R. B. McGray, Surveyor, Urban District Council Offices, Selby.

Slough.—Extensions at Gotha Works for Messrs. Peters & Co., railway carriage furniture manufacturers.

Stockton-on-Tees.—Additions at Newtown School (1,500*l.*); Mr. J. Tweedie, Town Hall, Stockton.

Stoke-on-Trent. — School, Rookery-lane; Architect, Education Offices, Stoke.

Stone (Staffs).—Additions to factory, Oulton-road, for Messrs. Bostock & Co., boot manufacturers.

Stowupland.—Houses (180*l.* each); Mr. G. Harrison, Surveyor, Rural District Council Offices, East Stow.

Sunderland.—Tuberculosis pavilion on site of isolation hospital (1,100*l.*): Mr. William Crozier, Architect, Shire Hall, Durham.

Sutton-in-Ashfield.—Fire-station; Mr. W. Burn, Surveyor, Urban District Council Offices, Sutton.

Swindon.—Business premises for Mr. J. H. Pakeman (900*l.*); Messrs. Drew & Sons, architects, 28, Regent's-circus, Swindon; Mr. A. J. Colbourne, builder, County Building Works, Swindon.

Swinton.—Additions to Cyclone Works for Messrs. Mathews & Yates, Ltd., electrical engineers, etc.

Tavistock.—Ten almshouses (3,080*l.*): Messrs. Pearn Brothers, builders, Gilwell-street, Plymouth.

Thirsk.—School (100 places); Mr. J. C. Wrigley, North Riding Education Offices, Northallerton.

Trevethan.—Twenty-two houses: Mr. W. H. Tressider, Surveyor, Town Hall, Falmouth.

Troon.—Shops and houses, corner of Wellbeck-crescent and West Portland-street (4,000*l.*); Mr. Hugh Watt, Parkview, Troon.

Truro.—Alterations to various buildings, for dispensaries (1,640*l.*): Messrs. S. W. Jenkins & A. E. Brookes, County Hall, Rodmin.

Upminster.—Church hall (300*l.*); Vicar, St. Lawrence Church.

Uxbridge.—Alterations to factory for Messrs. F. Parker & Sons, Ltd., furniture manufacturers, Cowley Peachey, Uxbridge.

Velindre.—School; Dr. J. James, Secretary, Glamorganshire Education Offices, Cardiff.

Wensum View (Norwich).—School (3,964*l.*); Messrs. T. Gill & Son, builders, 28, Rupert-street, Norwich.

West Hartlepool. — Proposed pavilion (1,000*l.*), Park-drive, for the West Hartlepool Cricket Club.

Westoning. — School (1,700*l.*); Mr. F. Spooner, County Education Offices, Bedford.

West Sussex.—Additions to school, Aldingbourne (550*l.*); school, Lancing (1,478*l.*); and alterations to school, Rudgwick (260*l.*); Mr. L. Thompson, West Sussex Education Offices, Horsham.

Winchester.—Proposed baths, North Walls; Mr. W. V. Anderson, Surveyor, Town Hall, Winchester.

Wombwell.—Proposed completion of Parish Church (2,000*l.*), for the Vicar.

Worcester.—Proposed school; Messrs. T. Duckworth & F. F. Spackman, Education Offices, Worcester.

Worsley.—Additions to dye-house for Messrs. Burgess, Ledward, & Co., Ltd., dress goods manufacturers, 22, Dickinson-street, Manchester.

Wroughton (Swindon). — Rebuilding "Carters' Rest," for Messrs. R. B. Rowley & Co., Ltd., brewers (790*l.*); Messrs. Drew & Sons, architects, 28, Regent's-circus, Swindon; Messrs. Pope Brothers, builders, 33, Manchester-road, Swindon.

Yarm.—Grammar school (3,187*l.*); Messrs. G. Dobson & Son, builders, Stokesley.

Yoker.—Additions to works, Harvey-street, for Halley's Industrial Motors, Ltd.

* See also our list of Competitions, Contracts etc., on another page.

FOREIGN AND COLONIAL.

Buildings in New York.

According to the Annual Report of Mr. Rudolph P. Miller, Superintendent of the Bureau of Buildings for the Borough of Manhattan, the total value of the buildings erected in Manhattan during the last ten years is about 216,000,000*l.*, varying from 17,000,000*l.* in 1904 to 29,000,000*l.* in 1909. The number of new buildings varies from 659 in 1908 to 2,572 in 1909, the average cost ranging from 9,700*l.* to 26,000*l.* The total value of the buildings erected during 1911 in Greater New York amounts to nearly 40,000,000*l.*, showing for the entire city a decrease of 6·7 per cent. as compared with the preceding year. In Manhattan the proportion of fire-resisting buildings has increased from 31 per cent. in 1910 to 39·4 per cent. in 1911, and in the section between Fourteenth and Ninety-sixth streets the value of the fire-resisting buildings is 95 per cent. of all the new buildings.

Building Work, Canada.

The Imperial Trade Correspondent at Toronto (Mr. F. W. Field) has forwarded an extract from the local Press containing a description of the proposed municipal abattoir at Toronto. According to this description, the building is to be absolutely fireproof and sanitary; glazed bricks and tiles will enter very largely into its construction, whilst vitrified bricks will be used for the floors. The "rendering" building will include departments for the manufacture of oleo oil and stearine, and also for neatsfoot oil. The name and address of the United States firm of architects who have prepared the plans, etc., for the building may be obtained by British manufacturers on application to the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, London, E.C.

With reference to the notice on p. 206 of the *Board of Trade Journal* of July 25 last relative to the formation of a company to establish a chain of terminal warehouses from Montreal to the Pacific Coast in connexion with the Grand Trunk and Grand Trunk Pacific railway systems, H.M. Trade Commissioner for Canada now reports that this scheme has fallen through.

Belgian Cement.

The British Consul-General in Belgium reports that there was a considerable augmentation in 1911 of the amount of Belgian cement exported to Great Britain. For several years past the quantity of Belgian cement exported has been rapidly declining, but during 1911 there appears to have been a renewal of demand, the figures reaching 64,547 tons, as compared with 50,354 tons in 1910.

Schools, Hayti.

The British Acting Consul-General at Port-au-Prince (Mr. E. D. Watt) reports that *Le Moniteur* of October 9 publishes a law authorising the annual expenditure of 50 000 dollars (about 10 270*l.*) by the Department of Public Works for the construction of national schools in the Republic. Tenders will be invited for carrying out this work in accordance with the plans of the Department of Public Works, and exemption from customs duty is granted on all material which it may be necessary to import from abroad.

THE CONCRETE INSTITUTE:
PRESIDENTIAL ADDRESS.

THE twenty-seventh ordinary general meeting of the Concrete Institute was held on November 14, in the Lecture Hall at Denison House, Westminster, S.W.

The following were elected members of the Institute :—

W. J. B. Barker, London
G. J. Bertinshaw, Wellington, New Zealand
W. E. A. Brown, London
R. Cathcart, Cleveland, U.S.A.
R. T. Cooke, London
J. D. Cormack, Professor of Mechanical Engineering, University College, London
J. P. Day, London
P. Ion Elton, London
J. W. Gibson, Hull
A. W. Green, London
C. M. Gregory, Hove, Brighton
C. A. Duncan, Behar and Orissa, India
J. M. Jardine, Edinburgh
A. Bryce Johnstone, Brazil
W. R. Kerr, Melbourne, Australia
W. H. Lascelles, London
W. J. H. Leverton, London
S. G. Lyttle, Bijapur, India
G. Metson, London
A. H. Quick, London
G. T. Ritchie, Cape Town, South Africa
G. M. Stonier, Manchester
J. Edge Taylor, London
W. W. Tonkin, Johannesburg, Transvaal
F. J. Treacher, Malvern
H. A. Tristram, London
H. H. Turner, London
P. J. Waldram, London
F. V. Wharton, Port of Spain, Trinidad

Mr. E. P. Wells, J.P., who presided, said that this brought the total membership of the Institute up to 938. He then delivered his Presidential address, in the course of which he said they were all aware that the scope of the Institute had been enlarged to include structural engineering. The Science Committee had undertaken to compile a standard notation for calculations in structural engineering generally. Further effort in the direction of standardisation was being made by the same Committee in drafting a standard specification for reinforced concrete work, which at the present time was very badly needed, and also a report on the standardisation of attachments or joints in reinforced concrete. The Tests Standing Committee had the following subjects under consideration :—

1. The effect upon steel of the presence of sulphur in aggregates.
2. The grading of aggregates
3. The expansion and deterioration of concrete due to changes of atmospheric temperature.
4. The effect of the use of sodium silicate on the surface of concrete as affecting reinforcing metal.
5. The erratic results obtained by the Vicat needle in ascertaining the initial set of cement.

The Reinforced Concrete Practice Standing Committee were investigating :—

1. Methods of treating the surface of concrete.
2. Cracks due to the expansion and contraction of reinforced concrete.

A special Investigation Sub-Committee had been formed to investigate failures and accidents in connexion with reinforced concrete construction, and also the restrictions placed by the Local Government Board upon the granting of loans to local authorities for the purpose of undertaking work in that material.

The Practical Side of Reinforced Concrete Construction.

Proceeding, the President said :—

"With regard to the first and the principal constituent in concrete — namely, Portland cement—it is strange, at this present day, how many engineers and architects still adhere to the old specification of coarse grinding, consequently requiring aeration of the cement. It has been my lot only this week to come across a specification where it was stated the cement had to be spread on a floor for twenty-one days before being used. Those of us who are well acquainted with the present-day cement, and also its fine grinding, know how deleterious this is when great crushing strength is required. I think I have said, on more than one occasion at this Institute, that if cement is to be kept up to its full strength it is absolutely necessary that when it is received on the site of the works it should be stored in air-tight wooden bins ; and if this is done cement may be kept for many years and be just as good after the lapse of time as it was when freshly made, whereas if the cement be stored in sacks, and even a very small amount of moist air plays upon them, then the cement is rapidly hydrated and cakes in the sack. If, as is often the case, this cement be rubbed through a sieve, it becomes almost absolutely useless for purposes of concrete-making—by that I mean good concrete.

I have in my mind's eye a case of a contractor who bought cement in the month of October. The whole winter was a bad one, and he had very little opportunity of using the cement. It was stored in a shed through which the wind could blow freely, and he was rather astonished when the spring came and the cement was used that it would not set. He then wrote to the manufacturers, and when the matter was investigated the true cause of the mischief was found out.

I have myself on many occasions experimented with cement that has been so hydrated, and it is astonishing the enormous reduction in the strength, so much so that it becomes almost useless for making concrete.

Any of you who chooses to make the experiment can do so, and you will find that with the concrete made from an over-hydrated cement the amount of strength obtained will be very little indeed, and that its setting action will be so slow that it will practically take days before it shows much sign of hardening. The only use of such a cement is to mix with an over-clayed cement that is too quick setting ; by this means the setting action can be retarded.

Careful Choice in Aggregates.

Passing from cement, one is led on to the careful choice in all aggregates, the proper grading of the same, and also, what is of more importance, the seeing that everything is absolutely clean and the water pure.

I know it has been said that dirt is of some good in increasing the strength of cement concrete, but the only case that I can find where, over any period, a dirty aggregate increased the strength of the concrete was due to the fact that it had been mixed with a very over-clayed cement. It slowed down its setting action, and by that means did good ; but if the test had been carried over a lengthy period it would have been proved how fallacious is the advantage to concrete of dirt in any form.

With regard to aggregates consisting of gravels that are dredged either from the river or from the bed of the ocean, it is very seldom that the proper proportion of sand to coarse material is obtained. There is only one gravel that I know where one can see that the proportion is about correct, and that is obtained from the Spurn. In the ballast obtained from the Thames and along the East Coast there is at the present time a great excess of sand, and under any circumstances I would not in any way recommend that this aggregate should be used without separation of the larger particles from the finer and subsequent crushing of the coarse material.

The difference in the strength of concrete made with an excess of sand is very marked where the proportion of cement is not great ; that is to say, 6 to 1 and 7 to 1 concrete with an excess of sand show very great falling off in strength, whereas with richer mixtures and an excess of sand, though there is a falling off in the early stages of hardening, after a few years the concrete will almost come up in strength to a concrete made in the correct proportions. Of course, it is well known that for all waterwork a large proportion of sand is required so as to get a perfectly dense mixture, but in no case must this be overdone.

In concrete for waterwork it is not necessary to add anything to make it watertight. If concrete be properly made it will be absolutely impervious to moisture, and if it be found necessary to reduce the labour some of these compounds of hydrated lime are, no doubt, of utility in decreasing porosity, but, at the same time, concrete so made is not improved in strength.

Before leaving the subject of aggregates I wish to call particular attention, as I have done here on more than one occasion, to the use of Fletton bricks for concrete. I have found lately that wherever Fletton bricks have been used disruption has taken place in the concrete, and I think this is due to the presence of lime in the bricks. Fletton bricks that are dangerous to use are those with purple markings, and great care should be exercised by all those who propose to use brick aggregate for concrete work to eliminate absolutely Fletton bricks in any form whatever. In this I am borne out by several who have been unfortunate enough to use the bricks, the result being that the concrete has failed.

I was called in only a few months ago to a special floor that had been put down for testing bowls, when it was found that about a month after the floor had been laid it was becoming uneven in places. On examination it was found that in every case where the floor had risen Fletton bricks in the aggregate were the cause of the mischief.

It is always advisable in the making of concrete that it should be got into the work as quickly as possible, especially in the summer : with low temperatures it is not of such great importance, as the cold slows the setting action and also its hardening. In frosty weather the drier the concrete and the more ramming, so long as there is no chance of displacing any of the reinforcing, the better for the concrete, as it will set very much more rapidly than if there is an excess of moisture.

Reinforced Work and Moisture.

With regard to reinforced work, it is far better that the concrete should have a slight excess of moisture than a deficiency. Certain experiences that I have had lately have shown that where steel has been put into concrete that was too dry the air and moisture had got through the porous concrete to the steel and caused rapid corrosion.

In one case the bottom layer of concrete had been put in and allowed to set, the steel was placed on the dry concrete, and other dry concrete was placed on top. When this work was broken up it was found that the rods in the concrete were quite loose, could be turned round by hand, and the adhesion between the two layers of concrete was anything but good. Now, had the concrete been made wet, there would have been no separation between the steel and the concrete, it would not have been possible to twist the steel rods round in the concrete, neither would moisture have passed through the concrete to the steel and caused oxidisation after the alkaline salts had disappeared by age owing to the presence of air and moisture.

Excess of moisture, as we all know, decreases the crushing strength of the concrete ; but at the same time in nearly all structures there is generally such an excess of concrete in the compression member, especially where T-headed beams are used, that it is better to have the steel perfectly protected with a slightly weaker concrete than to have imperfect protection with a stronger concrete, because if imperfectly protected corrosion will be almost bound to take place, with consequent disruption of the concrete.

Excessive ramming in concrete is not at all necessary where it is made wet. It is far better to employ very light ramming and see that fine particles of the concrete are brought to the surface of the shuttering boards by means of steel slices or trowels. If this be done there will be very little danger of air finding its way through into the steel reinforcing, but a coarse aggregate first put in with an insufficiency of sand is almost always certain to have some porous parts through which the air and sulphur, especially in a London atmosphere, can attack the steel.

An Important Point in Reinforced Work.

It may be well here to call attention to what I consider to be a most important point in reinforced concrete construction, namely, that as the concrete is being put into the work test-cubes should be made both for ascertaining the strength of the concrete *in situ* and exposed to the ordinary atmospheric conditions, and also to ascertain in the laboratory the strength of a series of cubes made at the same time and kept under laboratory conditions. One set of cubes should be kept on the works exposed to the varying atmospheric conditions, and the other at the laboratory at the normal temperature, say, of 60 deg. Fahr.

Effect of Cold on Concrete.

Some years ago I made an experiment to see whether cold had any effect on concrete, and, if so, to what extent. I found that in the month of December, when the cubes were taken from about 60 deg. Fahr. and placed on a roof where the temperature fell to below freezing-point, a most alarming decrease took place in the crushing resistance of the concrete, and this remained so until such time as the weather became warmer, when the crushing resistance went up and was practically the same as shown by cubes made to the same gauging but kept under normal conditions.

This clearly shows that if a building is constructed in cold weather the crushing resistance of the concrete cubes kept on the works will be low, but if it be found that the other set of test-cubes, kept under laboratory conditions, shows a rapid increase in the strength, then it is only fair to assume, that the concrete that has been exposed to the cold air will, with favourable conditions, increase in strength an attain the same strength as the laboratory experiments.

The reason I am calling particular attention to this point is that if a building is constructed in the winter and the test loads are applied up to 50 per cent. in excess while the weather is cold, there may possibly be an excessive amount of deflection, owing to the fact that the strength of the concrete in compression is low, whereas if the experiment were held over until the warmer weather, when the compressive strength of the concrete was largely increased, then the deflection would be practically nothing—of course, assuming that the work in the first instance had been properly designed.

Testing.

If the work is properly designed, and if the supervision has been strict and the work has been carried out according to the drawings, it is fair entirely to dispense with the testing of the structure so long as the experimental cubes show that the concrete has attained the strength required by the engineer or architect.

It is rather foolish to test a structure when one knows by experience that the crushing resistance, owing to the cold, is low. It would be far better to wait until the weather had become warmer and the concrete had parted with a lot of its moisture, when it would have become much harder. On the contrary, if it is found that the laboratory tests are low, say, for the sake of example, one month after being made, then I should strongly recommend testing of the structure to ascertain whether there were anything seriously at fault. Having those conditions of a low laboratory test and a much lower *in situ* test, yet the structure not exhibiting any serious deflection, then the work may be passed; but still, it is advisable in all cases to watch the crushing experiments, as upon these depends almost entirely the strength of the structure. A good crushing resistance means that the concrete is strong in tension, strong in adhesion, and strong in shear, and, such being so, there is very little danger of the structure failing even if there is a deficiency of steel.

The testing of floors and other works is, as a rule, carried out on much too small a scale. Testing should be spread over an area that will at least take in always two sets of secondary beams as well as two spans of main beams completely. By this method of testing the beams always have their full load and the adjoining beams become unloaded, which gives the most severe form of test, unless absolute continuous construction be carried out.

My experience has taught me that where concrete is good, that is to say, mixtures of 5 to 1 and richer, with the ordinary normal loading for which the structure was designed, unless most delicate instruments be used there will be no deflection recorded, whereas when weak concretes are used, namely, 6 to 1 and under, then the deflection at times becomes very great.

In all cases in making deflection tests they should be made, not only at the centre of the span but also at the walls, as very often it is found that a large amount of the so-called deflection is due entirely to the squeezing of the brickwork, owing to the fact that the reaction has not been spread over a sufficient area of brickwork. In no case ought the load on the brickwork to exceed 8 tons per square foot: by this means a good distribution is obtained and the brick walls are strengthened thereby.

Causes of Failure.

In a great many works that I have seen where failures have taken place the failures have been very largely attributable to shuttering and strutting. I have in mind cases of beams deflecting 2 in. or 3 in. after the concrete has been filled into the mould, this being due entirely to the strutting sinking into the soft ground underneath. In several cases this has caused what appeared like shear cracks at each abutment, though the work afterwards stood the test load satisfactorily. Still, such cracks made the beam look unsightly, and there could not have been the same adhesion between the concrete and steel, owing to this settlement, as if the boxes had remained perfectly true and level during the whole time the concrete was being put in and until the same were struck.

I know of one case of a failure taking place entirely owing to the strutting sinking into the ground, the sinking taking place over more than a week. The concrete, therefore, never had the least chance of getting a fair adhesion to the steel, but was constantly being drawn away from it by this settlement of the strutting, so much so that when the strutting was removed the whole structure came down with a run.

It is always advisable, if there is any doubt at all about the ground, to have the latter tested beforehand, and it is far better to increase the sole-plates to double the size required, so as to prevent any possible chance of settlement, than to have an insufficient area with consequent settlement and trouble taking place.

Not only does the settlement cause a reverse camber of the beam, but it also gives a fall in the floors the wrong way, and it needs extra expense all round to make good such defective work.

All these are points that are easily obviated by the simple means of closely watching the work as it proceeds, and not allowing any concrete to be put in until the engineer or his representative is satisfied that the strutting is of such a nature that settlement is not likely to take place.

Strutting.

Strutting should always remain up as long as possible after the concrete has been placed in position; in fact, if it were not for the exigencies of trade and also the rapidity with which building works of the present day have to be erected, I should personally like to see all strutting remain up for very much longer periods than is generally allowed, because the harder concrete can get before removal and any weight can get thrown upon it the better it is for the structure as a whole. Unfortunately, in the present day the question of expense has to be very largely considered, and to allow strutting to remain up as long as one would like it would increase in a great many cases the cost of the work, and I am afraid it would become almost prohibitive. Of course, in cold weather strutting must be left up for periods 50 per cent. longer than is allowed in the summer-time, and a great many of the failures in this country, and more especially in America, are mainly traceable to the removal of the shuttering and strutting at too early a period in the life of the concrete. The concrete at the time of striking was weak, but had an extra fortnight or more been allowed for the hardening, then the works that have failed would do doubt have stood up.

Water and Concrete-Making.

Before finishing with concrete-making I would like to refer to water to be used therein. In this country, as a rule, water is almost invariably obtained from what is called a domestic source, namely, water supplied by large public companies who are extremely careful in what is sold to the public. Such being so, it is very rarely in England that one has to use water that does not come from the public supply; but there are cases where it is advisable carefully to examine the same before it is used. There are some places where the water is highly charged with gypsum compounds, and, such being the case, it behoves one to see that there is no likelihood of failure taking place owing to an excess of this compound.

In the South of France, in Algeria, and in a great many districts waters are highly charged with gypsum, and so bad is this in places that concrete is absolutely dissolved and disrupted in less than two or three years. Whenever there is any doubt as to the quality of the water to be employed an analysis should be made beforehand, and so prevent what might lead to a disaster.

Steelwork.

One of the great defects with regard to reinforced concrete is constantly raised by those who have not had much to do with the subject, and often by those who are largely connected with it, namely, the difficulty of getting steelwork placed in the position designed by the engineer. It is a difficult matter always to get the work placed in the designed position, owing to the carelessness of the British workman, whose idea seems to be to get the material into position as quickly as possible, no matter whether it be right or wrong, and in a great many cases if he has an opportunity of leaving the steel out he will do so. The only way to get over this difficulty is not to allow any concrete to be filled or poured in until the steelwork had been passed by the engineer or his representative. If this be done there will be very little danger to be apprehended, because if the steel is in the correct position, if the concrete is proved to be as good, as borne out by the *in situ* tests and by the laboratory tests, and if the strutting has not given way, then one may fairly assume that the work has been well carried out and will sustain all the loads for which it is designed, and that there will be no deflection, or else of such a slight nature that it is not worth troubling about. If, however, the steel be badly placed, the concrete be poor, and the strutting has failed, then there is no knowing what is going to be the result.

In a great many years of practical experience I have come to this conclusion, that even if there is a large deficiency of steel in the structure both in tension and in compression, and the concrete is of an excellent quality, there is hardly any chance of failure taking place, but if the steel is up to and even in excess of the requirements asked for, and by any chance the concrete be poor, then if an excessive load be placed upon the structure there is nothing to prevent it failing. As I have stated before, a rich concrete is strong in crushing, tension, adhesion, and shear, whereas with poor concrete exactly the reverse is the case.

A series of experiments that I carried out some years ago of some beams gave for thirty-three days' test a factor of safety of 5¼ to 1; in three years the factor was over 9 to 1. The whole of this was due entirely to a very good concrete which was absolutely homogeneous throughout, and when the beams broke they failed only at the centre, the only place where cracks developed. There was no sign of shear, and the diameters of the rods where the failure took place were, to all intents and purposes, the same diameters as when they were put in. These experiments, I think, simply show an enormous increase in the lever-arm, due to the rich concrete; in fact, in the case I now mention the lever-arm was practically the total depth from the axis of the tension members to the outside of the compression member of the beam; but even this will not account wholly for the enormous load that the beams carried, as the tests produced extraordinary stresses both in the steel and also in the concrete itself.

Labourers and the Carrying-out of Work.

A great deal has been done by the London County Council School of Building in educating clerks of the works and others as to the method in which the practical part of reinforced concrete construction should be carried out. They ought to go a step lower and take in hand labourers who are connected with the carrying-out of the work, because until such time as they themselves understand, to even a very slight extent, what is required of them, so long will they be careless in doing the work they have to do.

The foremen employed must be instructed to keep a sharp look-out on all their men, and not to allow laxity in any shape or form. If the men know that the foreman is up to all their so-called tricks of the trade, then they will take good care that the work is carried out in an efficient manner, but if by any chance the foreman is careless his workmen will be the same; and it will, I think, very often be found that where anything serious takes place it is not only the men but the foreman and even the clerk of the works on the job who are answerable for this state of affairs. . . .

Electrolysis.

A point that was investigated by the Science Committee some time ago was one which it is advisable, I think, for me to call attention to, and that is electrolysis. I have watched one work where this mischief occurred, and only about a couple of months ago I made a further examination and found that the mischief was still increasing. It is a moot point with some as to whether there is any electrolytic action or not, but personally I have very little doubt upon the subject, so that it behoves all designers and contractors to see that there is no possible chance of electric currents finding their way into the steel reinforcing, because, should they do so, I do not think there is any doubt whatever that it will mean the eventual disruption of the concrete. It only requires the exercise of care to put a stop to this and to be perfectly certain that all cables throughout the reinforced concrete work are properly insulated, and that there are no stray currents wandering about the work.

Calculations of Reinforced Concrete and Mathematics.

I think a great many of my hearers will agree with me in regard to the calculations of reinforced concrete work that a great deal too much mathematics has been imported into the subject and that common sense has had to take a back seat.

If we were dealing with two materials, both of which were absolutely constant—that is to

say, the concrete constant within a month after it was made in strength as the steel is immediately after it is rolled—then it would be possible to go in for mathematical formulæ of a high order; but where you have a material—*i.e.*, concrete—the strength of which, if all portions are good, is increasing day by day, and in some cases attaining a strength of three, four, or more times that which it was originally calculated for, how is it possible in these ways to formulate any formulæ which are even moderately correct? It is far better to use more common sense and simplify or formulate empirical rules which you know are absolutely safe in their application. It is no good trying to extract the square root of two—it is useless. I have seen cases where the stresses have been worked out to five places of decimals, and it could all have been done by mental arithmetic, and the result would have been so close that it was really not worth while troubling about.

I see cases constantly where rods are put into work varied in diameter to 32nds of an inch. That is not at all necessary. It wastes time on the work, and in a great many cases a wrong rod goes into the wrong place. It is far better to adhere in all cases to commercial sizes, never advancing beyond 16ths of an inch, and if possible advancing only by $\frac{1}{8}$ths, as by that means the size of the rod is clear to the naked eye and does not require a caliper to be put upon it to find out whether it is $\frac{21}{32}$ or $\frac{22}{32}$ of an inch. Such reinforcements as these simply show how designers lack common sense and bring the work into disrepute. Exactly the same thing takes places with calculations submitted for approval. A mass of figures will be carried out into millions where the whole lot can be simplified by reduction into tens or hundreds, and the elimination of anything beyond two places of decimals. The simpler calculations are made the less liability there is of errors creeping in, and if an error does creep in then it is much easier to discover; but where a whole foolscap page of figures is used to arrive at a result, it means in a great many cases simply courting disaster, as well as being also a waste of time and expense with a view to possibly saving a pennyworth of steel.

I have always been a great enemy to the complicated calculations, as I do not think they are at all necessary. It only brings to mind the largest building that has ever been constructed in London. I am now speaking of as long ago as about five-and-twenty years. In an arch rib there was a deficiency in the centre of the span of, I think, $\frac{1}{2}$ in. in a large sectional area of steel. To make up this deficiency in compression a bar 2 in. by $\frac{1}{4}$ in. was riveted on, and this only for a length of 2 ft. or 3 ft., thus making mathematics simply an absurdity, whereas no common-sense engineer would for the sake of $\frac{1}{2}$ in. in 100 sq. in. ever think of doing anything so absurd.

The same applies to reinforced concrete. It is far better to work in all cases to commercial sizes of rods, even if there be a slight deficiency in sectional area, than to put in multiples of rods of all diameter so as to make up a given sectional area. This entails an enormous amount of work, not only upon the designer, but also upon the foreman who has to take charge of the work, and upon everybody connected therewith, and it is of no practical value whatever. Therefore I should like to see in all rules made for reinforced concrete that common sense should enter more largely into the formulæ that are given to the world, and not a mass of mathematics provided, which the authors know perfectly well are even then empirical, because one material is a constant and the other is an inconstant."

Mr. H. Percy Boulnois, M.Inst.C.E., Chairman of Council of the Royal Sanitary Institute, in proposing a vote of thanks to the President, said materials could be standardised, but unfortunately one could not standardise men, and the personal element of the men came into the work enormously. The best design might be ruined by bad workmanship.

Mr. C. S. Meik, M.Inst.C.E., who seconded the vote of thanks, expressed the opinion that unless one could get good workmanship one could not get good work in reinforced concrete. For all such work the men should be specially trained, and one should make sure that there was not a man amongst them who had been accustomed to make concrete as it used to be made. He emphasised the necessity of making test cubes when doing important work. Such cubes made as the work was going on were of great value afterwards should anything happen to the work. If a failure took place, for instance, during testing it could be found out by reference to the cubes made on that particular day whether the failure was due to the cement or to bad workmanship, and the engineer's mind would be relieved to a great extent when it was found the cement was not at fault.

Mr. E. Fiander Etchells, A.M.I.Mech.E., in supporting the vote of thanks, said he would like to make the Institute "*The* Institution for Structural Engineers and Architects," because it was the Institution *par excellence* for them. There was no other institution in this country which combined architects and engineers in one corporate body, though there might be in Austria and in Germany.

NEW YORK WATER SUPPLY.

UNTIL 1774 the City of New York was supplied with water from wells, mostly sunk at street corners. The oldest of these, dating from 1658, was opposite the fort at Bowling Green.

The first public waterworks system was constructed in 1774, from the plans of Christopher Colles, an English engineer. The source of supply was the old "Collect Pond" on the site of the present Tombs, and the water was pumped by steam engines to a reservoir between Pearl and Walker streets in Broadway, being distributed thence through mains formed of hollow logs, similar to those formerly used in London for the same purpose.

In 1799 the Manhattan Water Company obtained a charter for supplying the city with water, which they drew from wells near the junction of Reade and Centre streets, and pumped into a reservoir between Broadway and Centre-street, whence it was delivered through hollow log mains.

In 1834 the New York State Legislature authorised the city authorities to obtain supplies from the Croton River, and the works were completed in 1842. The first reservoir on this river was formed by building a dam 50 ft. high, and the water was conveyed to New York in a masonry aqueduct 8 ft. 5½ in. high by 7 ft. 5 in. wide. For the greater part of its length the conduit followed the Hudson River, hills being pierced by tunnels and valleys filled by stone embankments. The Harlem River was crossed by a bridge of fifteen arches with 50-ft. and 80-ft. spans.

Although designed for the maximum output of 36 million gallons per day, the original Croton Aqueduct was required to deliver as much as 95 million gallons per day in 1880, so as to keep pace with the enormously increased consumption.

In 1884 an additional supply of 23 million gallons daily was secured from the Bronx and Byram Rivers, and in 1890 a second aqueduct from the Croton River was brought into use. This work, known as the New Croton Aqueduct, is 133 ft. 6 in. high by 13 ft. 6 in. wide, and has a capacity of 300 million gallons daily. It crosses the Harlem River by a tunnelled siphon 1,300 ft. long and 300 ft. below water level, and cost 4,000,000*l.*

Storage reservoirs constructed in the Croton Valley, and including the New Croton Reservoir, bring up the storage capacity to more than 104,000 million gallons for the boroughs of Manhattan and the Bronx, the boroughs of Brooklyn, Queens, and Richmond having independent supplies.

As the three aqueducts—two from the Croton River and one from the Bronx and Byram Rivers—can only deliver about 400 million gallons daily, while the average consumption is more than 300 million gallons, works were inaugurated, as a result of the recommendations of the 1902 Commission, for obtaining an additional supply of 500 million gallons daily from the Catskill Mountains.

The works, which were commenced in 1905, include the Ashokan Reservoir, with a storage capacity of 130,000 million gallons; the Catskill Aqueduct, 17 ft. high by 17 ft. 6 in. wide, and 92 miles long; Hill View Reservoir, in New York, with a capacity of 900 million gallons; Kensico Reservoir, on the Bronx River, with a capacity of 40,000 million gallons; and distribution mains, 34 miles long, for supplying the five boroughs of Greater New York.

The works now in progress will cost about 40,000,000*l.*, and will yield some 250 million gallons daily. Additional impounding reservoirs will be constructed later for the purpose of providing the further supply of 250 million gallons daily from the Catskill Mountains.

WESTMINSTER CITY COUNCIL.

THE following amongst other matters were dealt with at the fortnightly sitting of this Council on November 21:—

Thames Embankment Extension.—It was decided to pay 50,000*l.* to the London County Council towards the cost of the Thames Embankment extension and improvements at Westminster, as soon as a loan for that amount can be obtained, and to pay a further 50,000*l.* when the properties in Abingdon-street have been pulled down and a part of the land thrown into the public way.

British-American Tobacco Company's Premises.—A letter had been received from Messrs. Gordon & Gunton with reference to the Council's order as to the level of the lowest floor of the new premises at Millbank for the British-American Tobacco Company, stating their contractors say it was almost impossible to make a good job if the basement be tanked with 1-in. asphalt as required by the Council, especially on vertical work, and they strongly recommended ¾-in. asphalt. They applied for permission to tank the basement with ¾-in. asphalt. It was agreed that the order be varied as requested.

Wood-Paving Contracts.—It was agreed that the Improved Wood Pavement Company, Ltd., be informed that the Council was not prepared to consider an offer for the continued maintenance of the wood-paved carriageways of certain streets, in regard to which notice for the termination of the contract had been given.

TRIBUNAL OF APPEAL UNDER THE LONDON BUILDING ACT.

Galsworthy *v.* London County Council.

THE Tribunal of Appeal under the London Building Act sat at the Surveyors' Institution on November 21 to hear an appeal by Mr. Frederick Thomas Galsworthy against the certificate of the Superintending Architect of Metropolitan Buildings, dated May 31, defining the general line of buildings on the south side of Euston-road, between Southampton-street and Fitzroy-street. Mr. Ernest Pollock, K.C., and Mr. D. Young appeared for the appellants, and Mr. Daldy for the London County Council. Mr. G. Mould appeared for the executors of Sir Horace Regnalt, the owner of the premises at the corner of Southampton-street, as an interested party, reserving his right to give notice on an appeal within the prescribed time.

Mr. Pollock, K.C., said the appellant was the owner of 49, Warren-street and 347, Euston-road, which were premises immediately behind one another. Fifteen years ago he appeared before the Tribunal in respect of this very portion of the road, and the Tribunal then decided the general line of buildings between Southampton-street and Tottenham Court-road, within which the appellant's premises were situated. The Superintending Architect had now, by his certificate of May 31, laid down a new line, which cut through premises already erected in the block. He contended that in face of the decision of the Tribunal in 1897 the new certificate of the Superintending Architect was bad.

Mr. A. A. Hudson (Chairman) asked how the Tribunal could hear an appeal in respect of a matter which they had already decided.

A long legal argument followed, in the course of which Mr. Pollock contended that under sect. 22 his position was that of an aggrieved person in consequence of the Superintending Architect giving a new certificate, and he did not think it was possible for him simply to go on and treat the new certificate as waste paper. The certificate was applied for by the County Council, and he took it that it was their intention to act on it.

Mr. Daldy thought the Tribunal had jurisdiction to hear an appeal. What he said was that the decision of 1897 was not a determination of the building line of this particular place in the Euston-road, but was a determination of something else. The Tribunal could inquire whether the circumstances had altered, and whether, in fact, that the 1897 decision was on the general line of buildings.

The Chairman said the point was that between 1897 there might have been alterations

in the district which might cause the line to be changed.

Mr. Pollock said he was agreeable to evidence being heard of what had taken place since 1897, but he would object to the cases before 1897 being gone into.

Mr. Daldy said he could not agree to that.

Mr. Pollock quoted from the decision of the Tribunal in 1897, which said that the general line of buildings on the southern side of Euston-road, between Southampton-street and Tottenham Court-road, was as defined on the plan annexed. He called attention to the case of Lilley *v.* London County Council in the House of Lords, and submitted that no one could get rid of the previous decision unless there had been changes affecting the general line of buildings in the area.

Mr. A. J. Lambert, surveyor, said he had examined the property between Southampton-street and Fitzroy-street. There had been no changes in the buildings since 1901, except the rebuilding of Dunhill's property.

The parties agreed on the suggestion of the Chairman that there had been no alteration in the buildings between Fitzroy-street and Southampton-street, except Dunhill's premises, which, Mr. Daldy said, were erected by consent, and therefore could not be taken into consideration in any determination of the line.

Mr. Pollock pointed out that the certificate of 1902, giving consent to Dunhill's premises, which were built within the line laid down by the Tribunal, was not necessary.

Mr. Daldy said Mr. Pollock's argument was that the Tribunal could go into the 1897 decision, but they were not entitled to go into it to the extent of finding out what it really was. He submitted that if they were entitled to go into it or proceed on it at all, they were entitled to find out what it really was. If that was done he contended that the decision of the Tribunal of 1897 was not a decision as to the general line of building at all. Of course, the Tribunal was the best judge of what it really had before them in 1897, but he hoped to satisfy them by evidence that what they really decided upon in that case was with regard to all the buildings on the site. In view, however, of the decision of the House of Lords in Fleming's case, the Tribunal was not entitled in 1897, although they supposed they were entitled, to overhaul a well-established general line of buildings.

The Chairman: You say we were wrong in law in 1897?

Mr. Daldy said how he put it was this—Under the Building Act the Tribunal had to discharge a certain duty, and on appeal they had to determine what was the position of the general line of buildings in a given piece of street. If by a mistake, whether in fact or in law, they had not determined it, then it came to nothing, and it did not matter whether it was wrong in fact or law. He stood or fell by that. If in 1897 the Tribunal discharged its duty under the Act, then he could not get behind what they had done; but he was entitled to show that by a mistake they did not discharge their duty, although they intended to do so.

The Chairman asked if Mr. Daldy moved the Court to set aside the decision of 1897 on the ground that there was already a line defined and the Tribunal had no jurisdiction. That was really the point; the answer would be: "Why did he not appeal?" Was Mr. Daldy not asking them to reopen the facts of the case to enable him to raise a point of law which ought to have been raised in 1897?

Mr. Daldy admitted that it came somewhat near that.

The Chairman said they were really being asked to decide that their decision in 1897 was no decision at all.

Mr. Daldy said it was a decision, in fact, but he denied that it was a decision under the Act of Parliament. One further point was that in 1897 the Tribunal dealt with a longer length of street than the Superintending Architect at that time dealt with.

Mr. Pollock strongly objected to the Tribunal admitting evidence as suggested by Mr. Daldy. It was only an ingenious method of trying to get the Tribunal to say their 1897 decision was bad.

The Chairman said the Tribunal were agreed that they should not hear the evidence. If they were to go into this they would have to reopen the cases of the properties of thirty-five persons who had interests in the section dealt with.

Mr. Daldy asked to be allowed to give evidence to show that from the time of the passing of the Metropolis Management Act there was a general accepted general line of buildings, with reference to which consents were asked for and given. His object was to show that in 1897, according to the decision in the case of Lilley *v.* London County Council, the Tribunal was not entitled to alter the general line of buildings laid down by the Superintending Architect between Southampton-street and Fitzroy-street.

The Tribunal ruled against Mr. Daldy on this point, and allowed the appeal, with 60 guineas costs.

LEGAL COLUMN.

Water Board Charges.

The case of Metropolitan Water Board *v.* Phillips has been carried to the House of Lords. By sect. 13, subsect. 1, of the Metropolitan Water Board (Charges) Act, 1907, the rateable value of premises upon which the water rate is levied is to be determined "by the valuation list in force at the commencement of the quarter for which the water rate accrues, or, if there is no such list in force, by the last rate made for the relief of the poor or other rate in which such last mentioned rate is included." By sect. 15 the quarter days are April 1, July 1, October 1, and January 1. The question was, what was the valuation list in force? On April 6, 1909, under the provisions of the Valuation (Metropolis) Act, 1869, a supplemental valuation list came into force in which the rateable value of the premises in question was 400*l.* On June 2, 1910, the overseers had sent to the Assessment Committee a supplemental list, placing the value at 399*l.*, but on objection to this list the Assessment Committee reduced the valuation to 234*l.*, and this was returned and signed October 3, 1910—*i.e.*, three days after the first quarter's water rate in question had begun to accrue. The majority of the Court of Appeal held that the latter list related back, and was therefore in force on October 1. The House of Lords have reversed this judgment, holding no other list to be in force on October 1 but that which came into force April 6, 1909, and which placed the rateable value of the premises at 400*l.* The reasoning of this judgment is easier to follow, but in the case in question it represents some hardship to the water consumer, as had the new list been issued and signed but three days sooner his water rate would have been nearly halved. Hard cases, however, make bad law, and, as the Lord Chancellor pointed out, in some cases the assessment might be increased and not diminished, in which case the loss would have fallen on the Water Board, as the lower assessment would have remained in force.

The Trade Disputes Act.

The House of Lords have recently delivered judgments of the utmost importance on sect. 4, subsect. 1, of the Trade Disputes Act, 1906, in the case Vacher & Sons, Ltd., *v.* London Society of Compositors, which we noted in the Court of Appeal, the *Builder*, April 12 last. The action was one for conspiracy and libel brought against a trade union, the libel complained of being to the effect that the firm dealt unfairly with their employees. The facts were not denied, as the defendant union never delivered a statement of defence, but relied solely on sect. 4 of the Trade Disputes Act, and applied to be struck out of the action. Sect. 4, subsect. 1, of the Trade Disputes Act is as follows:—"An action against a trade union, whether of workmen or masters, or against any members or officials thereof, on behalf of themselves and all other members of the trade union in respect of any tortious act alleged to have been committed by or on behalf of the trade union, shall not be entertained by any Court."

For a long time it has been uncertain whether this section was to be interpreted in its natural meaning or whether the qualification inserted in other sections, and in subsect. 2 of this section, as to certain acts being privileged only when done in contemplation or furtherance of trade disputes, must not be read into it. These doubts, we may say, have really only arisen because it could not be realised that the Legislature intended to place trade unions outside the law as regards wrongful acts committed entirely unconnected with trade disputes. The House of Lords have now held that the meaning of the words used by the Legislature being plain, they must be interpreted in their natural sense, and that the Act does grant this absolute immunity from any restraint in the Law Courts. We have always held this view, as we pointed out the effect of this section when the Bill was before Parliament on the Third Reading and subsequent stages (see the *Builder*, November 17, 1906).

The important point now to be noted is the effect of this section as thus interpreted on the Trade Union Bill now before Parliament. The Legislature can never have seriously intended to enable trade unions, irrespective of trade disputes, to commit every tortious act, from libel to damage to property, or even personal violence, without being liable to a civil suit, as in no civilised state can such a license be allowed to any class, and now that the effect of the section has been demonstrated by the House of Lords we imagine every law-abiding person will call upon the Legislature to remedy what it is quite obvious can only be deemed to be a slip or mistake in the Act.

LAW REPORTS.

OFFICIAL REFEREE'S COURT.
(Before Mr. EDWARD POLLOCK.)

Removing and Reconstructing a Tudor House: Tibbenham *v.* Gill.

THE hearing was begun on November 19 and continued on subsequent days of a claim for the recovery of 1,695*l.*, balance of an account, advanced by the plaintiff, Mr. Frederick Tibbenham, of Lower Brook-street, Ipswich, against the defendant, Mr. John Hamblet Gill, of Oxford-street, London. The subject-matter of the action has reference to the removal from Hawstead, near Bury St. Edmund's, and its re-erection at Clacton, of a Tudor house. In respect to that the claim was for 850*l.* There was also a claim in respect to furniture supplied by the plaintiff, and, amongst other things, to an oak staircase, which, according to his case, had been adapted so that it might be in accord with a house of the Tudor period. There were claims under several other heads. Various defences were raised, the defendant pleading, *inter alia*, that the plaintiff agreed to supply materials and complete certain works for 800*l.*, and not 850*l.*, subject to certain conditions, including one that no alterations should be paid for unless advised in writing, and then only at agreed prices and upon the architect's valuation. It was also pleaded that the defendant's architect had not given the certificate required by the contract as a condition precedent to the defendant's liability to pay. It was further alleged that the plaintiff was claiming payment for many things as extras, which were included in and covered by the contract price, and were not extras at all. Several other pleas were raised by defendant as to other items.

Mr. E. Grimwood Mears and Mr. H. Atkins (instructed by Messrs. Rye & Eyre) appeared for the plaintiff; and Mr. Greer, K.C., and Mr. C. A. S. Garland (instructed by Messrs. Dod, Longstaffe, Son, & Fenwick) represented the defendant.

Mr. Grimwood Mears, in opening the case, pointed out that the defendant's architect, Mr. Scheuermann, of Ipswich, had endeavoured to get Mr. Tibbenham to sign a contract, but the latter never did so, preferring to do his business with Mr. Gill. Counsel intimated that this house at Clacton had placed upon it a tablet stating that it was a Tudor house of 1490, removed from near Bury St. Edmund's by Messrs. Gill & Reigate, of London. Answering the Official Referee concerning the absence of a contract, Counsel said the parties had made a bargain, and, except as a reason for raising money, there was no reason why plaintiff should be bound down by a cast-iron contract at a time when the house was half completed.

The plaintiff, in the witness-box, stated that in 1904 he began doing business with Messrs. Gill & Reigate. Witness had made reproductions of panelling, furniture, and houses for Messrs. Gill & Reigate. Witness added that he had introduced Mr. Scheuermann to Messrs. Gill & Reigate, that event taking place in connexion with the putting up of the Tudor House at the White City. It was in February, 1910, that he discovered an old house being used as a barn at Hawstead. He communicated with Messrs. Gill & Reigate, and subsequently purchased the house for 250*l.* The firm agreed to buy it, but ultimately it became Mr. Gill's liability. Mr. Gill was managing director of Messrs. Gill & Reigate. In January, 1911, Mr. Scheuermann had got out the specifications, and on January 22 he received the specifications and the plan. He handed them to a Mr. Harris and a Mr. Warner, who did work for him, and, after receiving their aid, he arrived at the conclusion what the cost would be. He thought that the cost to carry out the work named in the specification would be about 1,000*l.* or 1,100*l.* Mr. Gill had told him at Oxford-street that that was too much, and that if he could not reduce it they could not sell the Tudor houses.

The Official Referee stated that this was only one house.

Mr. Tibbenham: But they have been selling others. Proceeding, he said that Mr. Gill had

wanted this house at Clacton to be a great advertisement for the firm. Mr. Gill had added that if witness could reduce the price he would make it up to him. Defendant had subsequently said that he would not give more than 850*l.*, and Mr. Scheuermann told witness it could not be done for the money. Witness replied that he would have to do it. Witness began the erection of the old building he had taken down at Hawstead on May 4. He agreed that his account was made up as follows:—850*l.* for house, 583*l.* for extras, and 243*l.* for garden, making a total of 1,942*l.* 19s. 8d. His prime-cost book showed that the total cost to him of the defendant's house was 1,888*l.* 14s. 2d., which gave him a profit of 54*l.* on the house.

Mr. Mears: Regarding these extras coming to 583*l.*, is there one single extra put into that building that did not receive sanction or was not to the approval of the defendant or his representative?—No.

Mr. Greer: I do not describe them as extras. I agree that the work was done.

Mr. Mears: As regards every item you have charged as an extra, are the prices fair and reasonable?—They are.

Can you, if my friend wants it, place before him your prime-cost book, showing him all the items?—Yes. Witness added that he had nothing to do with the drawing up of the specifications. Witness was then examined at length as to the old oak staircase. He remarked that it was quite easy for a man with his experience to make an old staircase look approximately of the Tudor period.

Mr. Mears: In Tudor times they had a difficulty in getting upstairs, and knocked the stairs about. Did you make provision for that?—Yes, we had men running up and down stairs for some time with heavy boots.

In cross-examination by Mr. Greer, the plaintiff said that he refused to sign an agreement because he wanted 850*l.* in respect to the house and not 800*l.*

Mr. Greer suggested that the contract submitted to plaintiff in a subsequent form put the total price for everything at 1,050*l.*

Mr. Tibbenham: I am not quite certain.

Mr. Greer: I suggest to you that at no time did you ever take any objection to the sum of 1,050*l.* in that document?—Yes, I did; but I cannot tell the exactly the date.

Mr. Greer: Did you ever say to Mr. Scheuermann that he ought not to have put 1,050*l.* in the agreement, but that he ought to have put 1,100*l.*?—I did, but I can't tell the date.

Where?—In his own office.

You have done a certain amount of building work before you took this contract?—I have not done any ordinary building work.

Removing and re-erecting structures, and making them up with new parts as much in harmony with the old as possible?—Yes, I put additions to them. It has been very rare that I have had specifications before me.

The hearing was adjourned.

CHANCERY DIVISION.
(Before Mr. Justice JOYCE.)

Aherne *v.* Glover.

THIS was a case in which Mr. William de Lacy Aherne, an architect, of The Pleasaunce, King's Norton, sued Mr. Edward Glover, a coal merchant living at Warwick, for specific performance of a contract to purchase a house in Warwick-road, Solihull, at the price of 1,100*l.* His Lordship dismissed the action with costs.

Mr. Ward Coldridge, K.C., who appeared for the plaintiff, said that his client had built three houses in Warwick-road, Solihull. Defendant authorised an estate agent named Couchman to offer 975*l.* for one of these houses freehold. This was refused. Mr. Glover then called on Mr. Couchman, and handed him a letter containing the following:—

"I shall be willing to give 1,100*l.* for the freehold house with the site, on condition that the vendor shall put the house and gardens into a condition satisfactory to Mrs. Glover."

That, Counsel submitted, was authority to Mr. Couchman to make an offer, and Mr. Glover said in addition that he would pay 10 per cent. deposit on the purchase price, take completion at midsummer, with immediate possession of the garden for purposes of planting.

Mr. Couchman wrote the following letter to plaintiff:—

"Mr. Edward Glover writes he will give 1,100*l.* for the freehold land and house, and pay 10 per cent. deposit. He will be glad if you will give him possession of garden forthwith, in order that he may plant it. He will complete at midsummer next."

At the same time Mr. Couchman advised Mr. Glover to see the vendor himself, in order to arrange about the papering, preparing the garden, etc. An interview took place on February 26. Then Mr. Aherne told defendant that he would accept the offer of 1,100*l.*, and they went on to discuss the other matters.

On February 26, 1911, plaintiff wrote to Mr. Couchman, saying:—

"I am obliged to you for your letter of February 23. I will accept Mr. Glover's offer made through you of 1,100*l.* for the freehold house, completion at midsummer."

His Lordship: I feel very great difficulty about any binding offer having been made.

Mr. Ward Coldridge argued that Mr. Couchman was defendant's agent, and the letter contained all the elements of a good offer. Plaintiff had suggested to Mr. Glover that if the completion of the house was desired to be done at once, then the completion of the purchase should take place earlier than midsummer; but that was the only point left open on February 26. Mr. Glover found, however, that he could not obtain release from the tenancy of his then house until March, 1913, and, Counsel submitted, that it was on that account that he cried off the bargain. His first solicitor's letter said:—

"The letters contain no contract, and as your client (plaintiff) is not willing to make the alterations to the house and garden as stipulated by our client, the matter will not proceed."

As a matter of fact, plaintiff had always been ready to complete the house as arranged.

Plaintiff, in evidence, stated that the only matter left open on February 26, when he saw Mr. Glover, was whether the purchase should be completed in March, 1911, or the following midsummer.

Other evidence was also called.

Mr. Norton, K.C., for the defence, argued that no definite offer was made in the letter of February 23, and that Mr. Couchman had no authority to make such an offer; further, that the letters did not contain all the terms of the alleged contract, and on that ground could not bind the defendant.

Mr. Glover, in evidence, said that at the interview of February 26, the whole question of purchase or no purchase was left open until after he should have seen his landlord.

Other witnesses were also called for the defence.

His Lordship, in giving judgment, said the contract on which plaintiff relied was alleged to be constituted by the letters of February 23 and February 26, 1911. The first of these was the only scrap of writing in the case which could possibly be binding on the defendant, and when this was first read he had felt and expressed doubt as to whether, on the face of it, this was such a simple and unconditional offer as could by acceptance be converted into a contract. But in case it could or ought to be so construed, it was clear to his Lordship's mind that it was made without the authority of the defendant. In other words, the offer being unauthorised, no acceptance could convert it into a contract binding on the defendant. But on the evidence it seemed clear that this letter was not intended to be a simple unconditional offer, nor was it so treated by the plaintiff. Mr. Couchman was negotiating as to price only, and there were other material matters not referred to in the letter which it was arranged between Mr. Couchman and Mr. Glover should be left to be settled by direct negotiations between the plaintiff and the defendant himself. Mr. Couchman had no authority as to anything but price, or, rather, he declined to have to do with anything but price. If he had authority to make an offer, it was only on certain conditions not expressed or referred to in the letter.

Now, this so-called offer was not accepted at once. Before the acceptance of February 26 was written, plaintiff saw the defendant in order to discuss and negotiate with respect to these matters other than the price, and the meeting of that date terminated before any settlement was arrived at. The letter of February 26 was written by the plaintiff while these other matters remained unsettled. With regard to what took place at the interview, there was, indeed, a direct controversy; but Mr. Glover said that the meeting was taken up with discussion and negotiation as to what was to be done by the plaintiff to the garden and as to the date of completion, and as to certain suggested additions to the cloakroom conveniences, and there were also questions about the papers. Mr. Glover said these matters were unsettled, and his Lordship said he was inclined to believe there was no final or complete bargain concluded on February 26. Besides, all that passed was merely verbal, and there was no memorandum of any kind in writing on the subject. On any view of the case, therefore, when the letter of February 26 was written by the plaintiff, he was not entitled to treat the letter of February 23 as an unqualified offer to purchase. And defendant, whom, his Lordship said, he believed stated further that Mr. Aherne agreed to the whole of the negotiations standing over till the following morning, when Mr. Glover was to see his landlord. For some reason the defendant declined to proceed further, and there being no concluded contract, he was entitled to do so. In his Lordship's opinion, therefore, the action failed, and must be dismissed with the usual consequences.

CHANCERY DIVISION.
(Before Mr. Justice SWINFEN EADY.)

Barker *v.* Vecchietti.

MR. EDWARD MALCOLM BARKER, the owner of property in Vauxhall Bridge-road, was the plaintiff in an action against Mr. Quinto Vecchietti, of 311, Vauxhall Bridge-road, and he asked for an injunction to restrain the defendant from interfering with any building operations incidental to the raising of a party wall between his property and the defendant's in accordance with plans approved by the London County Council and the joint award of the plaintiff's surveyor and the defendant's surveyor in pursuance of sect. 91, subsect. 3, of the London Building Act, 1894.

Mr. Colefax, K.C. (with him Mr. Goddard), in opening the case, said the matter arose out of the construction of a cinematograph palace in Vauxhall Bridge-road, at the Victoria end. The plaintiff was the leasehold owner of Nos. 313, 315, and 317, Vauxhall Bridge-road, and the defendant was the lessee of No. 311. Between Nos. 311 and 313 there was a party wall, and when the plans had been passed for the alteration of Nos. 313 and 315 into a picture palace, notices were served upon the defendant under the London Building Act, 1894, with respect to the wall, it being proposed as part of the alterations to raise the height of the wall, so that the new roof might rest upon it. After notice had been served and an award made under the Act, and after the building operations had commenced, the defendant proceeded to pull down part of the work on the party wall. The plaintiff thereupon applied to the Court for an *ex parte* injunction, which, upon motion, was extended until the trial or further order. After that the work proceeded, but the defendant again threatened to further interfere with the work. He did not do so, however, as he was warned of the consequences, and now the premises had been completed, and, so far as the plaintiff was concerned, the matter was merely ancient history. There was, of course, the question of getting the injunction made perpetual, and that was the object of the present application. There was further a counterclaim by the defendant, which was somewhat difficult to understand. The defendant had been represented by different solicitors, but now appeared in person. The counterclaim set out that the defendant protested against the party wall being built upon, as it would interfere with the access of light and air to his premises, whereon he carried on the business of a lodging-house keeper, and he claimed 3,150*l.* damages for (*a*) the raising of the wall, (*b*) for nuisance, and (*c*) damage to his lease.

His Lordship: There does not seem to be any facts in dispute, but you had better call your evidence and prove the award under the London Building Act.

Mr. Charles O. King, A.R.I.B.A., who acted as surveyor for the plaintiff in respect of the alterations, proved the services of the proper notices. As the first notice was not complied with, witness wrote to defendant, asking him to appoint a surveyor, and, as he did not appoint, witness appointed Mr. William Woodward to act upon defendant's behalf. They then agreed that Sir Alexander Stenning should be appointed third surveyor; but, in fact, it was not necessary to resort to Sir Alexander, as witness and Mr. Woodward agreed as to the award.

Mr. Colefax: Do the buildings interfere in any way with the amenities of No. 311, or in any way damage those premises?—Not at all.

Is there any obstruction of light?—No.

Mr. William Woodward, F.R.I.B.A., said he was appointed to act for the defendant in August, 1910, under the London Building Act. He agreed with the award submitted by Mr. King, and he acted throughout in strict accordance with the Act and in the interests of the defendant. Now that the work had been completed, no damage, as far as he could see, had been done to the defendant's premises, nor was there any interference with his light. A wall at the rear of the defendant's premises had been condemned, and the plaintiff had to rebuild it. He did so, and on the suggestion of witness faced it with white glazed bricks opposite the defendant's window. The defendant's light was, therefore, improved.

Mr. Edward Malcolm Barker, the plaintiff, said, on the question of nuisance, that, though the alterations had been completed and the

theatre working nearly two years, there had been no complaints of any kind.

The defendant made a long statement to the Court, and protested against the alleged interference with his premises.

In giving judgment, his Lordship, after referring to the facts, said that the plaintiff proceeded to build in accordance with the award. That was his legal right after compliance with the statute. The defendant took the law into his own hands, took no notice of the party wall notice, and while the building was proceeding pulled part of the wall down. He had no right to do anything of the sort, and, as he was claiming to interfere further, the plaintiff obtained an injunction against him. The plaintiff now asked to have that injunction made perpetual. The defendant contended that the wall ought to be restored to its old height. Why? He had no legal right to ask that, because the plaintiff, as adjoining owner in compliance with the statute, was entitled to build upon and raise the height of a party wall. The plaintiff had been manifestly right throughout, and was, therefore, entitled to have the injunction already granted made perpetual and to have the costs of the action.

Then the defendant put in a counterclaim, claiming damages for nuisance caused by the cinema theatre, and in respect of obstruction of ancient lights. With regard to the ancient lights, two surveyors had been called. and both denied that there had been any damage caused with regard to the nuisance by noise, etc., and the plaintiff's evidence had clearly disposed of that, and the counterclaim must be dismissed, without costs, as the plaintiff did not ask for costs on the counterclaim.

His Lordship added that he thought it right to say that the plaintiff seemed to have acted with every courtesy and consideration to the defendant, and the defendant seemed to have attributed that courtesy and consideration to a knowledge and consciousness on the part of the plaintiff that he was doing wrong. "There was," his Lordship added, "no hidden rascality in putting glazed bricks in the wall facing the defendant's premises."

Judgment accordingly.

Surveyor's Claim: Action against Sir John Bethell, M.P.

MR. JUSTICE PHILLIMORE, in the King's Bench Division, on November 19, concluded the hearing of an action by Mr. William Henry Savage, engineer and surveyor, residing at Cockfosters, Hertfordshire, against Sir John Henry Bethell, Bart., M.P., of Upton Park, Essex, to recover 125*l.* 1s. for supervision work claimed to have been done for the defendant in connexion with certain land at East Ham from 1900 to 1901.

The defendant denied liability and said the work was not done to his order.

Mr. Forbes Lankester, K.C., appeared for the plaintiff, and Mr. Colam, K.C., was for the defendant.

Mr. Forbes Lankester explained that Sir John Bethell and a Mr. Burges were the owners of land that adjoined, and a proposal was made for the construction of a new road and a small exchange of land between the two owners that would have the effect of considerably increasing the value of the land. Mr. Savage superintended the work so far as it affected the property of Mr. Burges, and was paid his 5 per cent. fees, and counsel said, he would show that he did the same service for Sir John Bethell in regard to that part of the road affecting his land, and he was entitled to the remuneration claimed. Counsel said that the contention between the parties seemed to be whether the plaintiff really supervised the whole work; but he would show that the work was done by the contractor, Mr. Anstead, as one job, and that plaintiff supervised the whole. He believed he would be able to establish clearly that the work that plaintiff supervised was work done in the interests of the defendant, and was work for which the defendant paid the contractors.

Mr. Lankester proceeded to deal with the various items in the claim incidental to the construction of the road, and Mr. Colam, K.C., said he could say at once that the defendant's case was that what plaintiff did he did for Mr. Burges, and was paid by him, and defendant was not liable for any services by the plaintiff.

Mr. Savage gave evidence that for twenty-one years he was Engineer and Surveyor to the East Ham Local Board, and since 1899 he had been in business as a consulting engineer privately. He had, as the local surveyor, been brought into contact with Sir John Bethell in connexion with the development of land in the district. There was land owned by the defendant and Mr. Burges, and he conceived the idea of arranging an exchange of land and the making of the new road. He approached Sir John, and pointed out that the scheme would improve both properties and enhance the value of the land by bringing his land into better communication with other parts of the district. Both Sir John and Mr. Burges agreed to the construction of the road. Mr. Burges gave the contract to Mr. Anstead, and witness superintended and was paid for his work. Mr. Anstead had the whole contract, and witness also superintended as affecting the land of the defendant.

Counsel: Were you employed by Sir John in connexion with the work?—Certainly.

It was known by Sir John that you were acting as regards one part of the work for Mr. Burges?—Yes.

Did Sir John clearly know that you were asked to supervise the work as affecting the road on his land?—Certainly.

Was the work on the second portion carried on immediately after the first was finished, so that it made one complete job by one contractor?—Yes, it went on continually.

Was the whole plan of the new road your own idea?—Entirely.

And it was submitted to both Mr. Burges and the defendant?—Yes.

In cross-examination by Mr. Colam, K.C., Mr. Savage insisted that he acted for both Mr. Burges and the defendant.

Counsel suggested to the plaintiff that a Mr. J. H. Carte, surveyor, was employed by the defendant, and asked, if this was the case, what need had Sir John to employ plaintiff?

Plaintiff replied that Mr. Carte was an excellent architect and surveyor, but he was not an engineer. Plaintiff said he was taken ill while the work was in progress, but this illness had not caused his memory to be impaired.

Mr. Colam: Is it not a fact that Sir John, when you made your claim, denied that he ever employed you?—No.

For the defence, Sir John Bethell gave evidence, denying that he at any time employed the plaintiff to act on his behalf.

In the result his Lordship held that the plaintiff had not made out his claim, and entered judgment for the defendant, with costs.

CHANCERY DIVISION.

(Before Mr. Justice PARKER.)

Heavy Claim by and against Contractors: J. Aird & Co. *v.* the Tanjong Pagar Dock Board.

As already stated, the plaintiffs claim from the defendants 500,000*l.* as damages for alleged breach of contract in connexion with the construction of a wet dock at Singapore. Plaintiffs, who are the well-known contractors, allege that the defendants misrepresented the conditions under which the contract was to be carried out, and, therefore, that they were justified in repudiating the contract. Defendants denied these allegations, and served a notice on the executors of the late Sir John Aird, who in his lifetime was a member of the plaintiff firm and a party to the contract, making a claim against his estate of about 1,000,000*l.* as damages for breach of contract.

Mr. Upjohn, K.C., Mr. Macassey, K.C., and Mr. Schwann appeared for the plaintiffs; and Sir R. Finlay, K.C., Mr. George Cave, K.C., Mr. Romer, K.C., Sir Hugh Fort, Mr. Mathews, and Mr. Hull for the defendants.

The case for the plaintiffs having concluded, Sir Robert Finlay, in opening the case for the defence, said he proposed to call his Lordship's attention to the law applicable to each of three issues. The points he proposed to deal with were the charge of misrepresentation, the allegation that because the work that was contracted for was impossible, the plaintiffs were justified in refusing to go on with the work, and that an order for monoliths was given which was beyond the scope of the contract. With regard to the charge of misrepresentation, he would submit that it was clear beyond all doubt that the terms of the contract excluded any claim to rescind the contract on the ground of innocent misrepresentation. In order to get rid of the contract it was absolutely necessary that the plaintiffs should establish fraud, and fraud in the sense of moral delinquency committed by someone for whom the defendant Board were responsible. He would ask his Lordship to say that the charge of fraud ought never to have been made, and that it was absolutely essential, now that it had been brought, for the plaintiffs to prove dishonesty. If that were established, the whole of the terms of the contract would fall to the ground. Therefore, in the first place, he would address himself to the question of law with regard to misrepresentation, and, secondly, to state the nature of the facts with reference to the charge made against the defendants. Then he would deal with the question of the alleged impossibility of performing the contract, and submitted that it was no answer. If a man contracted to do a particular work it was no ground for his throwing it up to say that he found it impossible to do it. The authorities were absolutely conclusive on the point.

With regard to the question of damages, the learned Counsel contended that the plaintiffs were liable to pay damages to the defendants for not completing the contract which they had undertaken to complete.

His Lordship said he understood that the plaintiffs claimed damages by reason of the fact that the defendants had entered into possession of the works, which, plaintiffs maintained, they were not entitled to do, and plaintiffs alleged that that amounted to a repudiation of the contract.

Sir Robert Finlay said that the defendants maintained that they were justified in the circumstances in entering into possession of the works.

Mr. P. R. Warren, formerly engineer to the Dock Board, gave evidence in support of the defendants' case.

[The case was proceeding when we went to press.]

Drainage By-Laws.

AT Marylebone Police Court, a few days ago, Sir Edward White, formerly Chairman of the London County Council, of Upper Berkeley-street, W., should have appeared before Mr. Plowden in reference to a summons heard by him on February 9, taken out at the instance of the Marylebone Borough Council, for constructing at his residence soil pipes of iron instead of drawn lead with proper wiped plumbers' joints as required by the County Council drainage by-laws made under the Metropolis Management Acts of 1855 and 1899. Mr. Plowden originally dismissed the summons, but agreed to state a case. The magistrate's decision was reversed in the King's Bench Division, and the case was remitted for a conviction.

Mr. Plowden now fined the defendant (who was not present) 20s. and 2s. costs.

KING'S BENCH DIVISION.

(Before the LORD CHIEF JUSTICE and a Common Jury.)

Claim against a Builder for Arrears of Wages.

HIS LORDSHIP, on Wednesday, November 27, heard an action brought by Mr. William John Evans, a builder's clerk, of 114, North View-road, Hornsey, against Mr. Abram Kellett, builder and contractor, of 274, Birkbeck Bank-chambers, High Holborn, in which the plaintiff claimed 204*l.* alleged to be due to him as wages. The defence was a denial that the sum in question was due.

The jury found for plaintiff for the amount claimed, and his Lordship entered judgment accordingly, with costs.

LONDON COUNCILS.

Barking.—The tender of Messrs. Parsons & Parsons has been accepted, at 385*l.* 11s. 10d., for the execution of private street works in Devon-road. Other tenders were from:—Mr. W. J. Jackson, at 392*l.* 15s. 1d.; Messrs. E. Free & Sons, at 409*l.* 1s. 5d.; Messrs. W. Manders & Co., at 416*l.* 19s. 5d.; Mr. G. Percy Trentham, at 436*l.*; and Mr. D. T. Jackson, at 455*l.* 19s. The Surveyor has been instructed to report upon the question of making up Bennington-avenue.

Barnet.—It was decided at the last meeting to reduce the expenditure on the proposed new municipal offices to 4,000*l.*

Battersea.—The London County Council is to be asked to substitute wood for the existing granite setts in a portion of the tramway track in York-road. Repairs are to be carried out to the carriageways of nineteen roads at an estimated cost of 1,707*l.* Plans have been passed for Messrs. Chapple & Utting for the erection of forty houses in Rosecroath-road: Mr. W. J. Middleton has lodged plans with the London County Council for the erection of a building at the rear of No. 125A, Lavender-hill.

Berkhamsted.—Plans have been passed for Messrs. Gilbert Brothers, for the erection of three houses at Gossom's End.

Bromley.—The following tenders have been received for widening Poverest-lane, Orpington:—Messrs. J. Mowlem & Co. Westminster, S.W., 389*l.*; Messrs. E. Peill & Son, Bromley Common, 387*l.* 10s.; Mr. R. Large, High-street, Orpington, 335*l.* 15s.; Messrs. T. Wood & Sons, Crockenhill, near Swanley, 330*l.* (accepted). Application is to be made to the Local Government Board for sanction to borrow 166*l.* for

making up Clarence-road. Sanction has been received to the borrowing of 400*l.* for artificial stone-paving in Palace-road, and 550*l.* for widening Plaistow-lane.

Bushey.—Plans have been passed for Mr. G. Jaggard for the erection of five houses in King George's-avenue; also for the London County and Westminster Bank, Ltd., for the erection of premises in High-street.

Finchley.—The following resolution was moved at the meeting of the Urban District Council last week by Councillor Nicholls:—"That, having regard to the need in the district for the erection of additional dwellings for the working-classes, the Plans and Town Planning Committee be directed to take the matter into consideration and bring up a report thereon to the Council at an early date." He said all he wished to do was to secure power for the Town Planning Committee to deal with the question of more workmen's dwellings. Councillor Bloomfield, who seconded, said that these houses could not be put up by private enterprise. He had tried to himself, with only four houses, but he could not let them to workmen at a low rent that would pay, as the land was too dear. Councillor Royston said he was afraid that before very long, if the present policy of the Town Planning Committee continued, there would be very urgent necessity, not only for dwellings for workmen, but for those in a better position. Councillor Day thought the building of workmen's dwellings was the least objectionable form of municipal trading. Private enterprises would not build workmen's dwellings; people would not put their money into them. Councils had means of borrowing money on advantageous terms, and he was quite sure that the building trade would give local authorities a free hand with workmen's dwellings. After further discussion the motion was agreed to. The following plans have been passed:—Manor Farm Dairy, Ltd., dairy and offices, High-street, East Finchley; Mr. A. P. Joyce, additions to factory, King-street, East Finchley; Mr. J. Scarborough, three houses, Eton-avenue; Co-Partnership Tenants, Ltd., twelve houses, Addison-way extension and Oakwood-road; Mr. G. D. Vaughan, adaptation of North Finchley Skating Rink into cinema theatre, Great North-road, North Finchley.

Fulham.—Plans submitted by Mr. T. L. Kinton, on behalf of Mr. J. C. Mears, for the construction of sewers on the Broomhouse Estate and in Peterborough-road, have been approved.

Hammersmith.—Mr. H. A. Welch has lodged plans with the Spring-gardens authority for the erection of buildings upon an island site in St. Peter's-square.

St. Pancras.—Electricity mains are to be extended at an estimated cost of 2,000*l.*

Southwark.—Plans have been lodged with the London County Council by the following:—Mr. F. Danby Smith, architect, Parliament-mansions, Victoria-street, S.W., addition to the Newcomen Schools, Newcomen-street; Mr. M. W. Matts, architect and surveyor, Birkbeck-chambers, Holborn, W.C., erection of bridge across Cathedral-street; Messrs. Dawney & Sons, Ltd., engineers, Steelworks-road, S.W., extension of premises of Messrs. John Edgington & Co., Ltd., 108, Old Kent-road, S.E.

Stepney.—Plans have been lodged with the London County Council by Mr. W. Park for the erection of an addition to "The Mitre," White Horse-lane; as have also plans by Mr. William J. Fitt for the erection of a building at No. 76, Burslem-street.

Walthamstow.—The Surveyor has been directed to pave, kerb, and channel the footpath in Blackhorse-lane, subject to the owners depositing the estimated cost of the work. Plans, etc., are to be prepared by the Engineer for making up Empress-avenue. The tender of Mr. J. W. Pearce, Morecambe, has been accepted, at 18,548*l.*, for doubling the tramway track in Forest-road, including junctions to Chingford-road and Hoe-street, and doubling the track in certain portions of Chingford-road. A plan and estimate is to be prepared by the Engineer for the erection of five blocks of temporary buildings at the sanatorium for the treatment of tuberculosis.

Watford.—The tender of Messrs. J. Ellis & Sons, Leicester, has been accepted, at 918*l.* 15s. 4d., for carrying out a portion of the Callow Land storm-water and Balmoral-road sewerage scheme. Repairs are to be carried out to the sewer in Marlborough-road.

West Ham.—A portion of Canning-road is to be made up as a new street, the roadway to be paved with granite setts, and the footpaths with Corporation flagging. Tenders are to be invited for making up a portion of Dartmouth-road. Plans have been passed as follows:—The Corporation Electricity Department, extensions at 84, Romford-road, Stratford; Mr. M. W. Hudson, alterations to Salisbury Hall, Romford-road, Stratford: Mr. F. W. Waggett, conversion of Waldstein Hall, Plashet-road, Upton Manor, into cinematograph theatre, etc.; Mr. F. Sherrin, sailors' homes, 61, Lambert-road, Custom House; Mr. H. I. Cundy, proposed extension of cinematograph theatre, Richmond-road, Plaistow; Mr. W. J. Maddison, alterations and additions to "Foresters' Arms" public-house, Whitwell-road, Plaistow; Mr. W. Sweetingham, alterations to cinematograph theatres, Rathbone-street, Canning Town, and Albert-road, Silvertown. The following plans have been lodged:—Messrs. J. & P. J. Groom, amended plan of cinematograph theatre, Forest-lane, corner of Parliament-place, Forest Gate; Messrs. A. Mockridge & Co., addition to factory, 17, Second-avenue, Plaistow; Mr. J. Savage, cinematograph theatre, Upton-lane, Forest Gate.

Willesden.—Plans by the Engineer have been approved for widening a portion of Neasden-lane at an estimated cost of 346*l.*; as have also plans for making up the passageway at the rear of Nos. 232-252, High-road, Willesden Green. The following plans have been passed:—Mr. W. L. Trant Brown, on behalf of Mr. Alex. Phillips, two houses, Chatsworth-road, Willesden Green: Messrs. W. H. Holmes & Son, on behalf of the Holly Lodge Laundry Company, additions to 54, Chaplin-road, Willesden Green: Messrs. W. H. Holmes & Son, on behalf of Mr. J. E. Barnard, addition to garage, 20, Brondesbury Park; Mr. S. R. Miller, on behalf of Mr. C. Miller, addition to Kingsbury Laundry 37, Dudden Hill-lane; Messrs. Grainger & Price, on behalf of Messrs. T. Illingworth & Co., refrigerator-house, boiler-house, and chimney-shaft at New Works, Cumberland-avenue, Park Royal.

Wood Green.—Application is to be made to the Local Government Board for sanction to borrow 320*l.* for carrying out improvements to the footpath across the filter beds. Plans by the Surveyor have been approved for making up Ellesborough-road and Bridge-road as new streets, at estimated costs of 817*l.* and 901*l.* respectively. A plan lodged by Mr. J. Bronsdon for the erection of eight houses in Vallance-road has been approved.

OBITUARY.

Mr. H. Hall.

The late Mr. Henry Hall, who was elected in 1872 an Associate, and 1877 a Fellow, of the Royal Institute of British Architects, was for many years a partner of Mr. Keith D. Young, F.R.I.B.A., at No. 17, Southampton-street, Bloomsbury, W.C.; the partnership was dissolved as from December 31, 1911, owing to Mr. Hall's retirement from practise on account of ill-health. On last January 1, Mr. Young took into partnership his articled pupil, Mr. Alner Wilson Hall, A.R.I.B.A., the son of Mr. Henry Hall, the firm name of Messrs. Young & Hall remaining unchanged. Mr. Henry Hall made the plans and designs for Cheltenham Grammar School, in competition (May 8, 1886*). Messrs. Young & Hall were the architects of many large and important hospitals, infirmaries, workhouses, sanatoria, and similar buildings in London and the provinces. The category comprises the entire reconstruction, on an enlarged site, of the London Fever Hospital, originally designed by C. Fowler in 1848 (December 22, 1883*); the Hampstead General Hospital and extension buildings (January 31, 1903*); Great Northern Central Hospital, Holloway-road, N. (December 25, 1886*); East Sussex, Hastings and St. Leonards Hospital (December 6, 1884, and January 29, 1887*); Miller Memorial Hospital, Greenwich, and Royal Kent Dispensary (August 23, 1884*); the Medical School, and extension, Middlesex Hospital, and St. George-in-the-East Baths (October 18, 1890*); S.P.C.K. Training College, Stepney (1897); Royal South London Opthalmic Hospital, St. George's Fields (1891-2): Middlesex Hospital Convalescent Home, Clacton-on-Sea (April 25, 1896*); Crewkerne (Jubilee), Royal Portsmouth, Portsea, and Gosport, Huntingdon (isolation), and Royal South Hants, and Southampton Hospitals; Evelina Hospital, Southwark Bridge-road, reconstruction (1907); Dental Hospital, Leicester-square (1899); Sanatorium, Shrewsbury School (September 19, 1903*); Royal London Opthalmic Hospital, City-road, E., at a cost of some 80,000*l.* (1898-9); Seamen's Hospital, Royal Albert and Victoria Docks, with the London School of Tropical Medicine (1898-1900); remodelling and extension of Royal Berks Hospital, and Isle of Wight Infirmary and County Hospital. Ryde, North Staffs, Hartshill, and Chelmsford Infirmaries; Royal Boscombe and West Hants Hospital, in conjunction with Mr. G. A. Bligh Livesay; Royal Orthopædic Hospital, Oxford-street, W. (1898); Bolingbroke, Wandsworth (enlargement), and Maida Vale (June 22, 1901*), for Epilepsy and Paralysis, Hospitals; Metropolitan Hospital, Kingsland-road, E., entire remodelling and reconstruction (1908-9); Fitzroy-square, N.W., Hospital for the Home Hospital Association (1880-93); the St. Pancras Goldington-buildings, Great College-street, for 350 residents (1902); extensive additions, Chelmsford and Essex Hospital and Dispensary (1909), with Mr. W. H. Pertwee; Derbyshire Royal Infirmary (July 17, 1897*); New End, Hampstead, Workhouse; Warneford Hospital, Leamington, Jubilee Memorial, (1897-8); house at Dunsley (July 17, 1909*); and their designs for "Hostel of God, Free Home for the Dying," or Friedenheim (July 20, 1895*); and New Royal Infirmary, Manchester, for 500 beds (July 8, 1903*), for which they were one of the twelve nominated to compete.

* Illustrated in the *Builder*.

Mr. J. T. Bressey.

The death is announced also of Mr. John Thomas Bressey, who practised at Nos. 70-71, Bishopsgate-street Within, E.C., with Mr. C. H. Bressey (who became a member of the Architectural Association in 1893), under the style of Messrs. John T. Bressey & Son, architects and surveyors; the partnership was dissolved in last January. Mr. J. T. Bressey was elected a Fellow of the Royal Institute of British Architects in 1877. He was the architect of Holy Trinity Church, Leytonstone, (1878), and the Cobold-road Schools, for the (old) Wanstead School Board (1898); and of the Schools, with detached infants' schools, cookery and manual training centres, cottages, etc., on the Aldersbrook site, Ingatestone-road, for nearly 1,200 pupils in all (1906-11); the Downsell-road, Wanstead, Schools (1895-6), and other work for the Essex Education Committee, Wanstead District.

Mr. T. Arnold.

The late Mr. Thomas Arnold, formerly of No. 10, Basinghall-street, E.C., was elected in 1867 an Associate, and in 1904 a Fellow, of the Royal Institute of British Architects: he was placed upon the list of retired members in 1904. He was the architect of St. James's Presbyterian Church, Wood Green, and the Presbyterian Church, Tooting. He, we understand, took up his abode in Edinburgh a few years ago on giving up practice.

Mr. C. H. Rew.

The late Mr. Charles Henry Rew was elected a Fellow of the Royal Institute of British Architects in 1905, and practised with Mr. N. A. Rew, as Messrs. C. H. & N. A. Rew, at Great Berkhamstead. He was the architect of All Saints' Church, several houses, the new Granmore School buildings (with hall), the Infirmary and Workhouse improvements and extensions, and the Maintained School for Girls in Prince Edward-street, Great Berkhamstead; and of many similar works in the locality.

PATENTS.

APPLICATIONS PUBLISHED.*

23,692 of 1911.—Henry Frank Berry: Heating and drying of stone and other materials for use on roads and like surfaces.

23,695 of 1911.—Henry Frank Berry: Apparatus for heating and otherwise treating stone and like materials.

24,000 of 1911.—Henry Frank Berry: Apparatus for heating and otherwise treating stone and like materials.

24,117 of 1911.—Ludwig Schomburg: Pipe joints.

24,584 of 1911.—Walter John Hollick: Electric-light fittings.

24,656 of 1911.—Hermann Robert Zeitz: Machines for the manufacture of rood tiles or other similar articles.

25,513 of 1911.—James Alger Coombs and Samuel Seaborne: Apparatus for distributing sewage or like effluents on to filter beds and the like.

26,375 of 1911.—John Murray Leighton: Pile-drivers.

27,322 of 1911.—Henry Collett: Rubbing-stone for domestic or sanitary purposes.

29,228 of 1911.—Jean Debize and Alfred Rigaud: Safety lock for doors and the like.

508 of 1912.—Theophilus Lippiett, David James Lippiett, Thomas Lippiett, Stephen Lippiett, Benjamin Lippiett, and William Lippiett: Apparatus for timber hauling, weight lifting, and the like purposes.

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

(*Continued on page* 664.)

List of Competitions, Contracts, etc.

For some Contracts still open, but not included in this List, see previous issues. Those with an asterisk (*) are advertised in this number: Competitions, —; Contracts, iv. vi. viii. x.; Public Appointments, xviii.; Auction Sales, xxiv. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

***** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur.**

Competitions.

NOVEMBER 29.—**Langside, Glasgow.**—BRANCH LIBRARY.—Assessor, Mr. Alex. N. Paterson, A.R.S.A. Premiums, 50*l.*, 30*l.*, and 25*l.* Particulars from the Town Clerk, City-chambers, Glasgow.

NOVEMBER 30. — **Balham.**—SWIMMING-BATH.—The Wandsworth B.C. invite designs. See advertisement in issue of August 16. Particulars from Mr. P. Dodd, 215, Balham High-road, S.W.

DECEMBER 2. — **Carlisle.** — SCHOOL BUILDINGS, ETC.—Particulars from the City Surveyor, 36, Fisher-street, Carlisle.

DECEMBER 7. — **Rome.** — BRITISH SCHOOL AT ROME, SCHOLARSHIP IN ARCHITECTURE.—200*l.* per annum for three years. Particulars from Mr. Evelyn Shaw, 54, Victoria-street, S.W.

DECEMBER 20. — **R.I.B.A. Competitions.**—All work for the Studentships and Prizes, 1913, must be delivered before 4 p.m. at 9, Conduit-street, W.

JANUARY 1, 1913.—**Belfast.**—DWELLING-HOUSES.—Premiums of 25*l.*, 15*l.*, and 10*l.* Particulars from the City Surveyor, Belfast (1*l.* 1s.).

JANUARY 1, 1913. — **Dublin.**—MUNICIPAL BUILDINGS.—Assessor, Mr. Albert E. Murray, A.R.H.A. Conditions from the City Treasurer, Dublin. Deposit, 2*l.* 2s.

JANUARY 31, 1913. — **Jamaica.** — MUNICIPAL BUILDINGS.—To cost 9,000*l.* Premium 100*l.* Particulars from Messrs. Young, Ltd., 60, Fenchurch-street, E.C. (2s.)

FEBRUARY 3, 1913.—**Harrogate.**—SCHOOL.—The Harrogate Education Committee invite designs for a Council school in Skipton-road. See advertisement in issue of November 1 for further particulars.

FEBRUARY 22, 1913. — **Jordanhill, Glasgow.**—PROPOSED TRAINING COLLEGE.—Limited to six firms, named in "Competition News," December 1, page 635.

MARCH 1, 1913. — **Rangoon.** — MUNICIPAL BUILDINGS.—The Committee of the Municipality of Rangoon invite designs for the new Municipal Buildings. Honoraria of 300*l.*, 200*l.*, and 100*l.* respectively for first, second, and third. See advertisement in August 2 and 30 for further particulars.

MARCH 1, 1913.—**Sofia.**—DESIGNS FOR A ROYAL PALACE AND LAW COURTS.—Particulars from the Commercial Intelligence Branch of the Board of Trade, Basinghall-street, E.C. (see page 173, August 9, and page 350, September 27).

MARCH 1, 1913. — **Winnipeg.** — CITY HALL.—Limited to British architects in Canada. Assessor, Mr. Leonard Stokes, F.R.I.B.A.

JULY 10, 1913.—TOWN PLANNING SCHEME.—Promoted by the Institution of Municipal and County Engineers. Premiums, 10 guineas, 7 guineas, and 5 guineas.

NO DATE. — **Dursley.** — WORKMEN'S DWELLINGS.—The Parochial Committee of the Dursley R.D.C. invite designs for about thirty workmen's dwellings. See advertisement in issue of October 25 for further particulars.

NO DATE.—**Folkestone.**—PROPOSED KURSAAL.—Cost not to exceed 20,000*l.* Premiums 100, 50, and 25 guineas. See "Competition News," page 542, November 8.

NO DATE.—**Motherwell.**—HIGH SCHOOL.—Dr. Burnet, assessor. Premiums 50*l.*, 30*l.*, and 20*l.*

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NOVEMBER 29. — **Kincardine.** — GARAGE.—For erecting a new garage at Kincardine Lodge, Kincardine O'Neil. Plans, specifications, and general conditions of contract with Messrs. Davidson & Garden, 12, Dee-street, Aberdeen.

NOVEMBER 30.—**Cardiff.**—HOUSE.—For the erection of an engine-house at Ely Workhouse. Plan and specifications with the architect, Mr. Edwin Seward, F.R.I.B.A., Queen's-chambers, Cardiff.

NOVEMBER 30.—**Cleckheaton.**—ADDITIONS.—For alterations and additions to the public baths. Plans and general conditions of contract seen, and form of tender and quantities with Mr. C. Lund, M.I.M., and C.E., Engineer and Surveyor, Town Hall, Clerkheaton.

NOVEMBER 30. — **Sowerby Bridge.** — ALTERATIONS.—For alterations to girls' cloakroom, etc., at Tuel-lane Council School, Sowerby Bridge. Specification from Mr. F. J. MacDonald, Education Offices, Sowerby Bridge.

DECEMBER 1.—**Leeds.**—PREMISES.—Erection of business premises, New York-street, Leeds, for Messrs. C. A. Wilkinson & Co. Mr. W. Mason Coggill, architect, 4, Airedale-terrace, Stourton, Leeds.

DECEMBER 2.—**Buckie.**—VILLA.—For villa, to be erected at Cliff-terrace, Buckie. Plans and specifications with Mr. W. Hendry, architect, 91, West Church-street, Buckie.

DECEMBER 2.—**Glyn Neath.**—SCHOOL.—For erection of new school at Glyn Neath. Plans and specification seen, and quantities at the Neath Police-station, and with Mr. T. Mansel Franklen, Clerk of the County Council, Glamorgan County Hall, Cathays Park, Cardiff.

DECEMBER 2. — **London.** — REPAIRS, ETC.—For repairs and reinstatements to cast-iron gutters at Workhouse, Northumberland-street, St. Marylebone. Specification and form of tender from the Guardians' Architect, Mr. Saxon Snell, F.R.I.B.A., 9, Bentinck-street, Manchester-square, W. Deposit of 5*l.*

DECEMBER 3.—**Bradford.**—HOME.—Erection of a children's home at Thackley, Bradford. Quantities from Mr. Fred Holland, Architect to the Board, 22, Manor-row, Bradford. Deposit of 1*l.* 1s.

DECEMBER 3. — **Easingwold.** — COTTAGES.—For erection of two cottages and farm buildings on Manor House Farm, Easingwold. The Land Steward, Small Holdings Department, County Hall, Northallerton.

DECEMBER 3.—**Glasgow.**—SHELTER.—Erection of a shelter in Maryhill Park. Specifications and forms of tenders at the Office of Public Works, City-chambers, 64, Cochrane-street.

DECEMBER 3. — **Pembroke.**—DESTRUCTOR.—For the construction of a refuse destructor at electricity works, South Lotts-road. Plans, specification, and form of tender, with conditions of contract, at the Town Hall, Ball's Bridge, County Dublin. Deposit of 5s.

DECEMBER 3.—**Poole.**—KITCHEN, ETC.—For erection of a kitchen and alterations to male imbecile ward at the Workhouse, Longfleet, Poole. Plans and specifications with Mr. G. H. Seymour, architect and surveyor, Longfleet-road, Poole.

DECEMBER 3.—**Rhymney.**—IMPROVEMENTS.—For improvements in High-street Rhymney. Plans and specification with the Surveyor, Mr. W. Lloyd Marks, 61, High-street, Rhymney.

DECEMBER 4.—**Exeter.**—HOUSE.—Erection of a house at Alphington, near Exeter. Mr. E. H. Harbottle & Son, architects, County-chambers, Exeter. Deposit of 3*l.* for quantities.

DECEMBER 4.—**Huddersfield.**—ADDITIONS.—For erection of additions and alterations to Primrose Hill Working Men's Club. Plans seen, and quantities from Messrs. J. Berry & Sons, architects and surveyors, 3, Market-place, Huddersfield.

DECEMBER 4.—**London.**—LAUNDRY, ETC.—Erection of a laundry and disinfecting block at the Borough Isolation Hospital, Muswell Hill. Forms of tender, etc., and particulars from Mr. E. J. Lovegrove, Borough Engineer and Surveyor, Municipal Offices, Highgate.

DECEMBER 5.—**Cork.**—ROOM.—For construction of strong-room at Workhouse. Plan and specification at the Board-room, Workhouse.

DECEMBER 6.—**Halifax.**—SHED.—Erection of a shed and basement at Ladyship Mills, Cvenden, Halifax. Plans seen, and quantities from Messrs. Joseph F. Walsh, F.S.I., & Graham Nicholas, F.R.I.B.A., architects and surveyors, 10, Harrison-road, Halifax.

DECEMBER 6.—**Mallow.**—COTTAGES.—For erection of thirty-nine single cottages. Plans and specifications at the Office of the Council. Deposit of 5*l.*

DECEMBER 7. — **Camborne.** — RESIDENCE.—For erection of a residence at Camborne. Plans and specification with Mr. S. Hill, architect, Greenlane, Redruth.

DECEMBER 7.—**Manchester.**—SCHOOL.—For the erection of a new municipal school in Healdplace, Rusholme, Manchester. Plans seen, and quantities, on deposit of 2*l.* 2s., from Mr. Thomas Hudson, Town Clerk, Education Offices, Deansgate, Manchester.

DECEMBER 7.—**Portarlington.**—ADDITIONS, ETC.—Erection of the new sanctuary and other additions to the Church of Saint Michael, Portarlington. Plans and specifications with the architect, Mr. Thomas F M'Namara, 192, Great Brunswick-street, Dublin.

DECEMBER 9.—**Orsett.**—LODGE.—For the erection of a porter's lodge at the Hospital, Stifford. Plans and specifications with the architect, Mr. Christopher M. Shiner, A.R.I.B.A., 7, Adam-street, Adelphi, London, W.C.

DECEMBER 9.—**Tidworth.**—QUARTERS.—The erection of two detached officers' quarters (Group III.) at Tidworth, Hants, in the Southern Command. Plans, specification, and conditions of contract at the office of the Director of Barrack Construction, 80, Pall Mall, London, S.W., or at the Barrack Construction Office, Tidworth, Hants. Quantities on deposit of 10s.

DECEMBER 10.—**Hereford.**—SHED, ETC.—The Great Western Railway invite tenders for the erection of a grain shed, offices, etc., at Hereford. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Gloucester Station.

DECEMBER 10. — **Oxford.** — EXTENSION. — The Great Western Railway Company invite tenders for the extension of the platform covering at Oxford Station. Plans and specification seen, and forms of tender and quantities at the office of the Engineer at Paddington Station, London.

* DECEMBER 10 — **Silvertown.** — FIRE STATION AND DWELLINGS. — The West Ham B.C. invite tenders for erection of fire brigade station and firemen's dwellings. See advertisement in this issue for further particulars.

DECEMBER 11.—**Ramsgate.**—SCHOOL.—For erection of a new elementary school in Ellington-place, Ramsgate. Deposit of 3*l.* 3s. to the architect, Mr. G. G. Tucker, 1, York-terrace, Ramsgate.

DECEMBER 12.—**Dungannon.**—COTTAGES, ETC.—For building twenty-two single labourers' cottages, eighteen double labourers' cottages, and for fencing fifty-eight plots. Plans, specifications, and tender forms, on deposit of 5s., from Mr. William M'Guffin, Clerk of the Council, Workhouse Boardroom, Dungannon.

DECEMBER 14.—**Aberavon.**—OFFICES.—For the construction of offices and boundary wall at the Corporation gasworks at Aberavon. Specification, plans, and forms of tender, on deposit of 1*l.* 1s., from Mr. James Roderick, Borough Surveyor.

DECEMBER 14.—**Dover.**—ADDITIONS.—For additions and alterations to the girls' department of St. Martin's Council School at Markland-road, Dover. Forms of tender, specification, and quantities from the Borough Engineer, Mr. W. C. Hawke, A.M.Inst.C.E., Maison Dieu House, Biggin-street, Dover, on deposit of 2*l.* 2s.

DECEMBER 14. — **Truro.** — PREMISES.—For the erection of first section of proposed new premises for the County Museum and Art Gallery at Truro. Plans and specification with Mr. Sampson Hill, architect, Green-lane, Redruth.

DECEMBER 16.—**Aberdare.**—SHEDS.—For the erection of twenty-three playsheds at various Council schools. Plans and specification from Mr. T. Botting, Director, Education Offices, Aberdare.

DECEMBER 16.—**Strathmiglo.**—HALL, ETC.—For proposed hall and alterations on church at Strathmiglo. Plans and specifications seen at the Manse, and schedules from Mr. George Craig, architect, 85, Duke-street, Leith.

DECEMBER 19.—**Tonbridge.**—SCHOOL.—Erection of a new Council school at Sussex-road, Tonbridge. Plans and specification by the Committee's Architect, Mr. W. H. Robinson, M.S.A., and form of contract with Mr. Fras. W. Crook, Secretary, Caxton House, Westminster, S.W. Deposit of 1*l.*

DECEMBER 20.—**Milltownpass.**—SCHOOL.—Erection of National school buildings at Milltownpass, Co. Westmeath. Plans and specification at the Royal Irish Constabulary Barracks, Rochfort Bridge.

DECEMBER 20.—**Watford.**—VICARAGE.—For erecting a new vicarage for Christ Church, St. Albans-road, Watford. Drawings and specification by Mr. Henry A. Saul, A.R.I.B.A., of 20, Gray's Inn-square, London. Quantities from the surveyors, Messrs. Northcroft, Neighbour, & Nicholson, 329, High Holborn. Deposit of 1*l.* 1s.

* DECEMBER 21.—**Hersham.**—DRILL-HALL.—The Territorial Force Association of Surrey invite tenders for new drill-hall premises. See advertisement in this issue for further particulars.

NO DATE.—**Dewsbury.**—PREMISES.—For alterations to premises in Grove-street and Bond-street, Dewsbury. Mr. Wm. F. Cave, architect, surveyor, and valuer, Market-street, Heckmondwike.

NO DATE.—**Ford.**—ADDITIONS, ETC.—For alterations and additions to Infectious Diseases Hospital at Ford. Mr. Geo. T. Brown, F.R.I.B.A., F.S.I., architect, 51, Fawcett-street, Sunderland.

NO DATE.—**Great Eccleston.**—OFFICES, ETC.—For the erection of new offices, etc., at St. Mary's School, Great Eccleston. Plans and specifications at St. Mary's Presbytery.

NO DATE.—**Greenford.**—HOUSES.—For the erection of houses at Greenford, Middlesex. Mr. W. Sydie Dakers, Vernon House, Bloomsbury-square, W.C.

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

NO DATE.—**Torrington.**—HEADQUARTERS.—Erection of a new drill-hall and Infantry and Yeomanry headquarters at Torrington. Plans and specifications seen, and quantities, on deposit of 1*l.* 1s., from Messrs. Ellis, Son, & Bowden, architects and surveyors, Bedford-chambers, Exeter.

NO DATE.—**Treherbert.**—CHAPEL.—Erection of a new chapel at Treherbert. Plans, etc., at 17, Dunraven-street, Treherbert.

NO DATE.—**South Shields.**—THEATRE.—For erction of new Borough Theatre, South Shields. Quantities, on deposit of 2*l.* 2s., to the architects, Messrs. Gibson & Stienlet, 56, Camden-street, North Shields.

NO DATE.—**Swansea.**—THEATRE.—For the erection of a new theatre at Swansea, for Messrs. H. C. Behenna & Co. Deposit of 1*l.* 1s. for plans, specifications, and quantities to Mr. W. Ben Jones, architect and surveyor, Glantawe-chambers, Wind-street, Swansea

ENGINEERING, IRON, AND STEEL.

DECEMBER 2.—**Dublin.**—LIGHTING.—For the electric lighting of Cook-street dwellings. Specifications, with general conditions and form of tender, at the office of the City Electrical Engineer, Fleet-street, Dublin. Deposit of 10s. 6d.

DECEMBER 2.—**Essex.**—BRIDGE.—Reconstruction of the bridge which crosses the Stort navigation near Burnt Mill Station G.E. Railway. Drawings seen, and quantities from Mr. Percy J. Sheldon, M.Inst.C.E., County Surveyor, Chelmsford.

DECEMBER 2.—**Ongar.**—BRIDGE.—For the erection of a new bridge over the River Roding, in High Ongar. Drawings seen, and specifications from Mr. Percy J. Sheldon, M.Inst.C.E., County Surveyor, Chelmsford.

DECEMBER 3.—**Halifax.**—BOILERS.—For erection of two water-tube boilers, complete with superheaters and mechanical stokers. Specifications and particulars from Mr. W. M. Rogerson, M.Inst.E.E., Borough Electrical Engineer, Foundry-street, Halifax. Deposit of 10*l.*

DECEMBER 10.—**London.**—LIFTS.—For installation of three electric lifts and dismantling and removal of existing lifts at Renfrew-road Workhouse, Lower Kennington-lane, S.E., and Infirmary, Brook-street, Kennington, S.E. Specification and form of tender, on deposit of 2*l.*, from Mr. James L. Goldspink, Clerk, Guardians' Offices, Brook-street, Kennington-road, S.E.

DECEMBER 10.—**London.**—STATION, ETC.—For the erection of fire-brigade station and firemen's dwellings, Silvertown. Plans and specification seen, and forms of tender, quantities, and particulars from Mr. John G. Morley, Borough Engineer, Town Hall, West Ham, E., on deposit of 1*l.*

DECEMBER 10.—**Pennar.**—WIDENING.—The Great Western Railway Company invite tenders for the widening of a portion of the Pennar Branch Railway, Monmouthshire. Plans and specification seen, and forms of tender and quantities at the office of the New Works Engineer at Paddington Station, London.

DECEMBER 14.—**Balderton.**—INSTALLATION.—Erection of an electrical installation for street lighting. Particulars from the Clerk, Balderton P.C., 7, Osborn-terrace, Balderton.

NO DATE.—**Eglwysfach.**—HEATING.—For heating the church. Plan, specification, and particulars from Messrs. Deakin & Howard Jones, M.S.A., Plas Ynys, Borth, R.S.O.

FURNITURE, PAINTING, MATERIALS, etc.

NOVEMBER 29.—**Hartlepool.**—PAINTING.—For painting at the Workhouse. Specification at the Surveyor's Office, 8, Fountain-terrace, West Hartlepool.

DECEMBER 3.—**Bradford.**—PAINTING.—For the interior painting at Bowling Park Hall, Rooley-lane, Bradford. Specifications and particulars from Mr. F. Holland, Architect to the Board, 22, Manor-row, Bradford. 1*l.* 1s. deposit.

DECEMBER 3.—**Glasgow.**—PAINTING.—For the cleaning and painter work required at the various police offices and buildings in the eastern division of the city. Specifications and forms of offer at the Office of Public Works, City-chambers, 64, Cochrane-street.

DECEMBER 5.—**Fulwood.**—DECORATION.—For the inside decoration of six houses in Sharoe Green-lane, Fulwood. Specifications from Mr. James Clarke, Clerk to the Guardians, Union Offices, Preston.

DECEMBER 5.—**Newton Abbot.**—DECORATION.—For the decoration of the Alexandra Hall and ante-rooms. Specifications and conditions seen, and form of tender at the Surveyor's Office, Town Hall, Newton Abbot.

DECEMBER 6.—**Gillingham.**—COLOURING.—For colour-washing, etc., at various schools. Specification, general conditions, with forms of tender, from Mr. Andrew Johns, Secretary, 4, Gardine.-street, Gillingham, Kent.

DECEMBER 6.—**Sheffield.**—REPAIRS, ETC.—For plumbers' and glaziers' work required for general repairs. Specifications and forms of tender at the office of the Education Committee, Leopold-street.

DECEMBER 6.—**Southend.**—RAILS, ETC.—For the supply of approximately 200 tons of "Sandberg" steel rails and fishplates. Specification and form of tender from Mr. Ernest J. Elford, M.Inst.C.E., Borough Engineer, Clarence-road, Southend-on-Sea, on deposit of 2*l.* 2s.

✱ DECEMBER 7.—**London, S.E.**—SUPPLIES.—The House Committee of Guy's Hospital invite tenders for supplies for twelve months from January 1, 1913. See advertisement in this issue for further particulars.

DECEMBER 7.—**Manchester.**—TERRA-COTTA.—For the supply of red terra-cotta for the new Healdplace Municipal School, Rusholme, Manchester. Plans seen, and quantities, on deposit of 1*l.* 1s., from Mr. Thomas Hudson, Town Clerk, Deansgate Offices.

DECEMBER 11.—**Leeds.**—PAINTING.—For painting exteriors of properties owned by the Development Committee. Specifications seen, and forms of tender, with schedules, from Mr. W. T. Lancashire, City Engineer, Municipal-buildings, Leeds.

✱ DECEMBER 16.—**London.**—STORES.—The London General Omnibus Company, Ltd., invite tenders for supply of stores during 1913. See advertisement in this issue for further particulars.

DECEMBER 18.—**Harrogate.**—PAINTING, ETC.—For painting, colouring, etc., at the Royal Bath Hospital and Rawson Convalescent Home, Harrogate. Specifications from Mr. B. Shaw, Secretary.

NO DATE.—**Whitehaven.**—PAINTING.—For the colouring and painting of St. Begh's and St. Gregory's Schools. Specifications from the Secretary, Town Hall, Whitehaven.

ROADS, SANITARY AND WATER WORKS.

NOVEMBER 29.—**Barnstaple.**—DRAINAGE.—For drainage work. Particulars from Mr. E. Y. Saunders, M.Inst.M.C.E., Borough Surveyor, The Strand, Barnstaple.

DECEMBER 2.—**Cambridge.**—STONE.—For the supply of broken granite, syenite, basalt. Specification and forms of tender at the office of the Borough Surveyor, Guildhall, Cambridge.

DECEMBER 2.—**Swansea.**—MAINS.—For the extension of a 4-in. water main to the new road off Gorseinon-terrace, Gorseinon, in the parish of Llandilo Talybont. Plans, specifications, and conditions of contract at the offices of Mr. T. Trevor Williams, Engineer to the Council, Alexandra-road, Swansea.

DECEMBER 2.—**Whitley.**—STREET.—For carrying-out public improvement works in the reconstruction of the carriageway of Oxford-street, Whitley. Plan and specification seen, and quantities and form of tender from Mr. A. J. Rousell, A.M.Inst.C.E., Surveyor to the Council, Council Offices, Whitley Bay.

DECEMBER 2.—**Wolverhampton.**—STREETS.—For private street works, construction of new street off Upper Villiers-street. Plans seen, and specification and quantities from Mr. G. Green, M.Inst.C.E., Borough Engineer, Town Hall, Wolverhampton.

DECEMBER 2.—**Wombwell.**—MATERIALS.—For the supply of 800 tons granite, 400 tons whinstone 500 tons blue rock limestone, 1,000 tons tarred dross, 1,500 tons lump slag and rejections, 400 tons basalt, 200 tons dross chippings, 100 tons limestone asphalt 30 tons English cement, and various quantities of setts, kerbing, channelling, flags, and stoneware pipes. Particulars and forms of tender from Mr. W. Quest, Surveyor to the Council, Town Hall, Wombwell.

✱ DECEMBER 3.—**Ealing.**—ROAD-PAVING.—The Ealing T.C. invite tenders for road-paving. See advertisement in this isesue for further particulars.

DECEMBER 3.—**Rhymney.**—IMPROVEMENTS.—For improvements in High-street, Rhymney. Plans and specification with the Surveyor, Mr. W. Lloyd Marks, 61, High-street, Rhymney.

DECEMBER 4.—**Barnsley.**—ROADS.—For draining, flagging, channelling, and otherwise completing part of Longcar-lane and part of Blenheim-road. Drawings and specifications seen, and forms of tender from Mr. J. H. Taylor, M.Inst.C.E., Borough Surveyor, Manor House, Barnsley.

DECEMBER 4.—**Grimsby.**—ROADS.—For sewering, kerbing, channelling, and metalling of Harbrough Marsh-road, Immingham. Plans, specification, and conditions of contract at the Engineer's Office, St. Mary's Gate, Grimsby. Deposit of 1*l.* 1s.

DECEMBER 5.—**Ballincollig.**—MAINS.—For supplying and laying new water mains at Ballincollig. Plan and specification, on deposit of 20*l.*, with Mr. John Cotter, Clerk of Council, Board-room, Workhouse, Cork.

DECEMBER 5.—**Leicester.**—MATERIALS.—For supply of iron and steel, timber (English), sewerage ironwork, etc., bricks, Portland cement, stoneware pipes, granite, Breedon gravel, etc. Forms of tender, on deposit of 10s., from Mr. E. George Mawbey, M.Inst.C.E., Borough Engineer and Surveyor, Borough Surveyor's Office, Town Hall, Leicester.

DECEMBER 6.—**Bridgwater.**—STONE.—For the supply of stone for the roads. Forms of tender, particulars, and conditions of contract from the Council's Surveyor, Mr. W A. Collins, 56A, Eastover, Bridgwater.

✱ DECEMBER 6.—**Walthamstow.**—PERMANENT WAY.—The Walthamstow U.D.C. invite tenders for alterations and additions to the permanent way (light (electric) railways). See advertisement in this issue for further particulars.

DECEMBER 7.—**Birmingham.**—SEWER.—For the construction of about 450 yds. of stoneware pipe sewer and other incidental works in Hagley-road, near Sandon-road. Drawings and specification seen, and quantities and form of tender, on deposit of 2*l.*, from Mr. Henry E. Stilgoe, M.Inst.C.E., City Engineer and Surveyor, The Council House, Birmingham.

DECEMBER 7.—**Dorking.**—GRANITE, ETC.—For the supply of 560 tons of 1½-in. broken granite and about 150 tons ½-in. granite chippings. Forms from Mr. Wm. A. Clegg, the Council's Surveyor.

DECEMBER 7.—**Horsham.**—MATERIALS.—For the supply of broken granite, quartzite and chippings, picked surface flints, and pit flints. Forms of tenders from Mr. H. W. Bowen, A.M.Inst.C.E., County Surveyor, County Surveyor's Office, North-street, Horsham.

DECEMBER 7.—**Swansea.**—SEWAGE.—For the construction of a 12-in. sewer for a distance of about 248 yds., including the construction of two manholes, one flushing chamber, and one vent shaft, at Llysgwyn-terrace, Pontardulais. Plans, specifications, and conditions of contract at the offices of Mr. T. Trevor Williams, Engineer to the Council, Alexandra-road, Swansea.

✱ DECEMBER 9.—**Beckenham.**—STREET WORKS.—The Beckenham U.D.C. invite tenders for making-up of Overbury-avenue. See advertisement in this issue for further particulars.

DECEMBER 9.—**Wakefield.**—WORKS.—For private street works in Dale-street, Pilkington-street, and Jessop-street. Plans and specifications seen, and quantities and forms of tender from Mr. J. P. Wakeford, Assoc.M.Inst.C.E., City Surveyor, Town Hall.

DECEMBER 10.—**Hartlepool.**—MATERIALS.—For the supply of materials. Specification and forms of tender from Mr. Percy Horsley, Borough Engineer, Borough Engineer's Office, Hartlepool.

DECEMBER 10.—**Sheppey.**—TANK, ETC.—Construction of a filter, 25 ft. diameter, with screen chamber, settling tank, etc., the laying of about 90 yds. of 6-in. stoneware pipes, and appurtenant works in the Workhouse grounds. Plans seen, and specification, quantities, and form of tender at the Workhouse, Minster, near Sheerness. Deposit of 10s.

DECEMBER 11.—**Shalford.**—SEWAGE.—For laying in about 152 lin. yds. of 6-in. stoneware pipe sewer and two manholes in East Shalford-lane, Shalford. Particulars from Mr. Edward L. Lunn, Sanitary Surveyor, 36, High-street, Guildford.

DECEMBER 12.—**Berks.**—MATERIALS.—For the supply of broken road materials, gravel, and sand. Forms of tender and particulars from Mr. J. Fred. Hawkins, County Surveyor, Shire Hall, The Forbury, Reading.

DECEMBER 12.—**Westbourne.**—GRANITE, ETC.—For the supply of granite quartzite or other hard stone. Forms from Mr. H. Norris, Surveyor, West Ashling, Chichester.

DECEMBER 16.—**Donaghadee.**—SEWERAGE.—For supplying 5 miles of 7-in., 6-in., 4-in., and 3-in. cast-iron water mains; for the erection and completion of a pumping-station, consisting of engine and pump house, gas-producer house; for the provision and erection of a duplicate set of 20-b.h.p. suction-gas engines and plant; for the erection and completion of a ferro-concrete water-tower, 50 ft. high, with a capacity of 40,000 gallons; for the supplying about 3¾ miles of sewers, 18 in., 15 in., 12 in., and 9 in. diameter, with manholes, lamp eyes, and flushing chambers. Plans seen, and specifications, quantities, and forms of tender from the Engineer to the Council, Mr. Henry J. Weaver, M.Inst.C.E.I., M.I.Mech.E., F.G.S., Northgate-mansions, Gloucester, on deposit of 5*l.*

DECEMBER 30.—**Woking.**—SEWAGE.—For the construction of about three miles of 8-in. and 9-in. stoneware and cast-iron pipe sewers, and thirty-nine manholes. Drawings, conditions of contract, specification, and quantities at the offices of Mr G. J. Wooldridge, the Engineer to the Council, Council Offices, Woking. Deposit of 5*l.*

Public Appointments.

Nature of Appointment.	By whom Advertised.	Salary.	Application to be in
*BOROUGH SURVEYOR AND INSPECTOR OF NUISANCES	Ludlow Town Council	200*l.* per annum	Dec. 21
*SECOND ARCHITECTURAL ASSISTANT	Ceylon Government	See advertisement in this issue	No date.

Auction Sales.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*BUILDER AND JOINER'S PLANT, HAMPSTEAD—On the Premises	Joseph Hibbard & Sons	Dec. 3
*SANITARY ENGINEER'S STOCK AND PLANT, WESTMINSTER—On the Premises	Walter Mortlock	Dec. 3
*CONTRACTOR'S PLT., MCHRY., STOCK, & EFFECTS, ROCHESTER—On the Premises	C. D. Levy	Dec. 3
*BUILDING MATERIAL, GRAY'S INN-ROAD—On the Premises	Veryard & Yates	Dec. 5
*FREEHOLD BUILDING SITE, NOTTING HILL-GATE—At the Mart	Horne & Co.	Dec. 10
*"BRITANNIA WORKS," BRITANNIA-STREET, GRAY'S INN-ROAD—At the Mart	Horne & Co.	Dec. 10
*FREEHOLD PROPERTY, CROYDON—At the Mart	Joseph Stower	Dec. 12

PATENTS—*continued from page 661.*

843 of 1912.—Thomas Cank: Buckets, pails, and the like.

5,893 of 1912.—Henry Frank Berry: Heating and drying of stone and other materials for use on roads and the like surfaces.

10,379 of 1912.—Edward Richards, Frederick Burris, Frederick Meredith Burris, and Ernest Harry Burris, trading as Fred Burris & Sons: Clips, straps, or holdfasts for pipes and the like.

10,498 of 1912.—Frederick Augustus Homer: Tap for water, steam, or other fluids.

12,217 of 1912.—Thomas Ritter von Oxinski: Instrument for marking out timber, stones, and the like.

12,928 of 1912.—Carl Rohrer: Chimneys and ventilating shafts.

12,993 of 1912.—Alexander Gibb, Thomas Graham Menzies, and Robert Chalmers: Driving and extracting of piles, posts, and the like.

14,800 of 1912.—Richard Brierley: Water-heating apparatus.

15,287 of 1912.—Jacob Henry Coffman: Door stop and holder.

16,537 of 1912.—Gustav Lehmann: Doors.

TO CORRESPONDENTS.

NOTE.—All communications with respect to literary and artistic matters should be addressed to "THE EDITOR" (and not to any person by name); those relating to advertisements and other exclusively business matters should be addressed to "THE PUBLISHER," and *not* to the Editor.

All communications must be authenticated by the name and address of the sender, whether for publication or not. No notice can be taken of anonymous communications.

The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

November 7.—By STIMSON & SONS.

Ealing.—31, The Grove (s.), f., y.r. 56*l.*	£800
Bermondsey.—1 to 5, George-row, f., w.r. 156*l.*	850
Walworth.—106, Boyson-rd., u.t. 38 yrs., g.r. 5*l.* 5s., e.r. 38*l.*	220
Camberwell.—2, Dagmar-rd., u.t. 42 yrs., g.r. 7*l.*, e.r. 40*l.*	200

By NEWBON & SHEPHERDS.

Hampstead-rd.—172 and 174, Seymour-st., f.g.r. 28*l.*, reversion in 18 yrs.	695
Haverstock-hill.—Chalk Farm-rd., f.g.r. 20*l.*, reversion in 12½ yrs.	400
Bloomsbury.—6, Queen's-sq., f.g.r. 12*l.*	375
Kilburn.—53 to 67 (odd), Percy-rd., f.g. rents 52*l.*, reversion in 59 yrs.	1,100
Finchley.—49 and 51, Clifton-rd., f.g. rents 13*l.*, reversion in 98½ yrs.	300
Leyton.—1 and 2, Webster-rd., f.g. rents 8*l.* 8s., reversion in 83 yrs.	160
19 and 21, Birkbeck-rd., f.g. rents 8*l.* 8s., reversion in 89 yrs.	160
30A, Goodall-rd., f.g.r. 5*l.* 5s., reversion in 89 yrs.	100
Plaistow.—49 and 51, Stratford-rd., f.g. rents 15*l.*, reversion in 83 yrs.	345
Barnsbury.—11, 13, and 15, Barnsbury-gr., f.g. rents 15*l.*, reversion in 52 yrs.	355
Wood Green.—3 to 6, Brampton Park-rd., f.g. rents 27*l.*, reversion in 67 yrs.	590
New Southgate.—46 and 48, Springfield-rd., f.g. rents 12*l.*, reversion in 45 yrs	250
44 to 50, High-rd., f.g. rents 35*l.* 6s., reversion in 76 yrs.	690

November 8.—By SAMUEL WALLROCK & Co.

West Thurrock, Essex.—1 and 2, Industrious-pl. (s.), f., y.r. 30*l.*	360
Stockwell.—49 and 51, Lingham-st., f., w. and e.r. 78*l.*	305

By GREEN & SONS.

Bermondsey.—Southwark-Park-rd., i.g. rents 31*l.*, u.t. 19 yrs., g.r. 16*l.*	£110

By HANSON & WHEELDON.

Marton, Lincs.—Farm, 163 a. 0 r. 34 p., f. and c.	4,231

By THORNBORROW & Co.

Penrith, Cumberland.—Bleak House, f., p.	475

November 9.—By BOULT, SON, & MAPLES.

Manley, Cheshire.—Part of the Manley Estate, 388 a. 3 r. 20 p., f.	20,476

By MILLAR, SON, & Co.

Bishop's Frome, Worcs.—Three farms, 395 acres, f.	10,800

November 12.—By WEATHERALL & GREEN.

Regent's Park.—2 and 4, St. Mark's-cres., u.t. 34 yrs., g.r. 7*l.* 5s., y.r. 100*l.*	610

By EDWARD WOOD.

Stoke Newington.—100, Palatine-rd., u.t. 61 yrs., g.r. 5*l.*, w.r. 39*l.*	150
2 and 4, Woodlea-rd., u.t. 61 yrs., g.r. 12*l.*, w.r. 76*l.* 14s.	250
Wandsworth.—11, 11A, 13, 13A, 61, and 61A, Quinton-st., u.t. 91 yrs., g.r. 20*l.* 10s., w.r. 152*l.* 2s.	770

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. for lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

PRICES CURRENT OF MATERIALS.

**** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 14 0
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 13 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0

GLAZED BRICKS—

Best White, Ivory, and Salt Glzd. Str'tch'rs	12 7 6	Double Headers	14 17 6
		One Side and two Ends	18 17 6
Headers	11 17 6	Two Sides and one End	19 17 6
Quoins, Bullnose, and 4½ in. Flats	15 17 6	Splays & Squints	17 7 6
D'ble Stretchers	17 17 6		

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	6 9	per yard, delivered.
Thames Ballast	5 6	" "
Best Portland Cement	36 0	per ton, "
Best Ground Blue Lias Lime	19 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 13s. 6d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 7½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 3
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

STONE (*Continued*).

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 3
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20×10 best blue Bangor	13 2 6	20×10 best Eur'ka unfading green	15 17 6
20×12 ditto	13 17 6	20×12 ditto	18 7 6
20×10 1st quality ditto	13 0 0	18×10 ditto	13 5 0
20×12 ditto	13 15 0	16×8 ditto	10 5 0
16×8 ditto	7 5 0	20×10 permanent green	11 12 6
22×10 best blue Portmadoc	12 12 6	18×10 ditto	9 12 6
16×8 ditto	6 12 6	16×8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz.)	3 6
Best Ruabon red, brown, or brindled (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz.)	3 6

WOOD.

BUILDING WOOD.	At per standard.				
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	£ 14	s. 0	d. 0	£ 15	s. d. 10 0
Deals: best 3 by 9	13	10	0	14	10 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	10	0	12	10 0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.	
Deals: seconds	1	0	0	less than best.	
Battens: seconds	0	10	0	"	"
2 in. by in. and 2 in. by 6 in.	9	10	0	10	10 0
2 in. by 4½ in. and 2 in. by 5 in.	9	0	0	10	0 0
Foreign Sawn Boards—1 in. and 1¼ in. by 7 in.	0	10	0	more than battens.	
¼ in.	1	0	0	"	

Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0	5 10 0
Seconds	4 10 0	5 0 0
Small timber (8 in. to 10 in.)	3 17 6	4 0 0
Small timber (6 in. to 8 in.)	3 5 0	3 10 0
Swedish balks	2 12 6	3 0 0
Pitch-pine timber (30 ft. average)	5 5 0	6 0 0

JOINERS' WOOD.	At per standard.				
White Sea: first yellow deals, 3 in. by 11 in.	£ 24	s. 10	d. 0	£ 25	s. d. 10 0
3 in. by 9 in.	22	10	0	23	10 0
Battens, 2½ in. and 3 in. by 7 in.	17	0	0	18	0 0
Second yellow deals, 3in. by 11in.	19	0	0	20	0 0
" " 3 in. by 9 in.	18	0	0	19	10 0
Battens, 2½ in. and 3in. by 7 in.	14	0	0	15	0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	14	0	0	15	0 0
Battens, 2½ in. and 3 in. by 7 in.	11	10	0	12	10 0
Petersburg: first yellow deals, 3 in. by 11 in.	21	10	0	22	10 0
Do. 3 in. by 9 in.	18	10	0	19	10 0
Battens	14	0	0	15	0 0
Second yellow deals, 3 in. by 11 in	16	10	0	17	10 0
Do. 3 in. by 9 in.	15	0	0	16	0 0
Battens	11	10	0	12	10 0
Third yellow deals, 3in. by 11 in.	13	10	0	14	10 0
Do. 3 in. by 9 in.	13	0	0	14	0 0
Battens	10	10	0	11	0 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	At per standard. £ s. d.			£ s. d.		
White Sea and Petersburg—						
First white deals, 3 in. by 11 in.	15	0	0	... 16	0	0
" " 3 in. by 9 in.	14	0	0	... 14	10	0
Battens	11	10	0	... 12	10	0
Second white deals, 3in. by 11in.	14	0	0	... 15	0	0
" " 3 in. by 9 in.	13	0	0	... 14	0	0
Battens	10	10	0	... 11	0	0
Pitch-pine: deals	19	0	0	... 21	0	0
Under 2 in. thick extra	0	10	0	... 1	0	0
Yellow Pine—First, regular sizes	48	0	0	upwards.		
Oddments	32	0	0	"		
Seconds, regular sizes	33	0	0	"		
Oddments	28	0	0	"		
Kauri Pine—Planks per ft. cube.	0	4	6	... 0	6	0
Danzig and Stettin Oak Logs—						
Large, per ft. cube	0	3	0	... 0	3	9
Small " "	0	2	6	... 0	2	6
Wainscot Oak Logs, per ft. cube	0	6	6	... 0	8	0
Dry Wainscot Oak, per ft. super. as inch	0	0	10	... 0	1	0
¼ in. do. do.	0	0	8½	...	—	
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch..	0	0	10	... 0	1	1
Selected, Figury, per ft. super. as inch	0	1	6	... 0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	... 0	1	0
Teak, per load	18	0	0	... 22	0	0
American Whitewood planks, per ft. cube	0	5	0	... 0	6	0
Prepared Flooring, etc.—	Per square.					
1 in. by 7 in. yellow, planed and shot	0	13	6	... 0	17	0
1 in. by 7 in. yellow, planed and matched	0	14	0	... 0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	... 1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	... 0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	... 0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	... 0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	... 0	13	6
1 in. by 7 in. " "	0	14	0	... 0	18	6
¾ in. by 7 in. white " "	0	10	0	... 0	11	0
1 in. by 7 in. " "	0	12	9	... 0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, per ton. £ s. d.			£ s. d.		
Rolled Steel Joists, ordinary sections	8	10	0	... 9	10	0
Compound Girders, ordinary sections	10	0	0	... 11	0	0
Steel Compound Stanchions	11	10	0	... 12	10	0
Angles, Tees, and Channels, ordinary sections	10	0	0	... 11	0	0
Flitch Plates	10	0	0	... 11	0	0
Cast Iron Columns & Stanchions, including ordinary patterns	8	0	0	... 8	10	0

METALS.

	Per ton, in London. £ s. d.			£ s. d.		
IRON—						
Common Bars	9	0	0	... 9	10	0
Staffordshire Crown Bars, good merchant quality	9	5	0	... 9	15	0
Staffordshire "Marked Bars"	11	0	0	...	—	
Mild Steel Bars	9	5	0	... 9	15	0
Hoop Iron, basis price	10	0	0	...	—	
" " Galvanised	17	10	0	...	—	
(*And upwards, according to size and gauge.)						
Sheet Iron Black—						
Ordinary sizes to 20 g.	10	5	0	...	—	
" " 24 g.	11	5	0	...	—	
" " 26 g.	12	15	0	...	—	
Sheet Iron, Galvanised, flat, ordinary quality—						
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15	10	0	...	—	
Ordinary sizes to 22 g. and 24 g.	16	0	0	...	—	
" " 26 g.	17	0	0	...	—	
Sheet Iron, Galvanised, flat, best quality—						
Ordinary sizes to 20 g.	18	10	0	...	—	
" " 22 g. and 24 g.	19	0	0	...	—	
" " 26 g.	20	10	0	...	—	
Galvanised Corrugated Sheets—						
Ordinary sizes, 6ft. to 8ft. 20 g.	15	0	0	...	—	
" " 22 g. and 24 g.	15	5	0	...	—	
" " 26 g.	16	15	0	...	—	
Best Soft Steel Sheets, 5 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12	10	0	...	—	
Best Soft Steel Sheets, 2 g. & 24 g.	13	10	0	...	—	
" " " 26 g.	15	10	0	...	—	
Cut Nails, 3 in. to 6 in.	11	0	0	... 11	10	0
(Under 3 in., usual trade extras.)						

LEAD, &c.

Delivered in London.

	£ s. d.			
LEAD—Sheet, English, 4lb. and up	21	17	6	... —
Pipe in coils	22	7	6	... —
Soil pipe	25	7	6	... —
Compo pipe	25	7	6	... —
ZINC—Sheet—	In casks of 10 cwt.			
Vielle Montagne	33	15	0	... —
Silesian	33	10	0	... —
Zinc, in bundles, 1s. per cwt. extra.				
COPPER—				
Strong Sheet per lb.	0	1	1	... —
Thin " "	0	1	2	... —
Copper nails "	0	1	0	... —
Copper wire "	0	1	0	... —
BRASS—				
Strong Sheet "	0	1	0	... —
Thin "	0	1	1	... —
TIN—English Ingots "	0	2	3	... —
SOLDER—Plumbers' "	0	0	11	... —
Tinmen's "	0	1	2½	... —
Blowpipe "	0	1	4½	... —

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

15 oz. thirds	2½d.	26 oz. fourths	4d.
" fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	" fourths	4⅝d.
" fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	" 21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft., Delivered.

⅛ Rolled plate	2½d.	Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
⅛ Rough rolled and rough cast plate	2½d.	Ditto, tinted	5d.
¼ Rough rolled and rough cast plate	3d.		

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 6
" " " in barrels	"	0 2 7
" " " in drums	"	0 2 8
Boiled " in barrels	"	0 2 8
" " in drums	"	0 2 11
Turpentine in barrels	"	0 2 5
" in drums	"	0 2 7
Genuine Ground English White Lead, (In not less than 5 cwt. lots)	per ton	29 17 6
Red Lead, Dry	"	26 12 6
Best Linseed Oil Putty	per cwt.	0 10 6
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 0
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 0
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 6
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 9
French and Brush Polish	0 10 6

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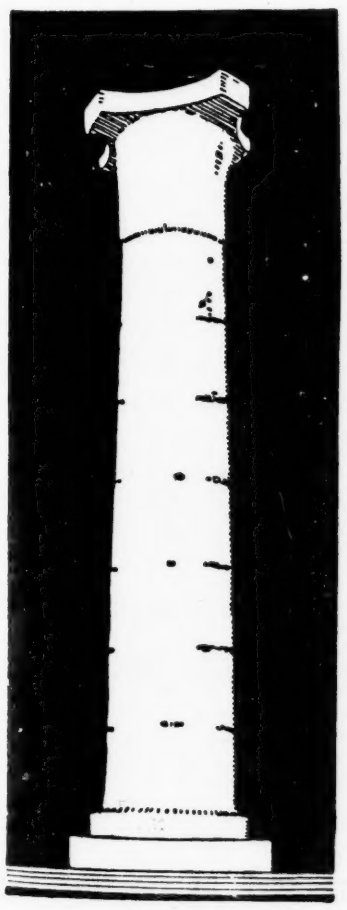

The International Building Trades Exhibition

(With Many Special Sections)

WILL BE HELD AT

LEIPZIG, 1913,

From the beginning of MAY to the end of OCTOBER.

This will be the First World's Fair of the Building Trade and of Homes Perfection.

The Exhibition Grounds cover the vast area of 400,000 square metres. They are situated at the foot of the noble monument of the Battle of Nations. The entire realm of building and of home perfection in its every phase is opened up by this Exhibition—the scientific, industrial, and social aspects being treated in their full significance.

Each section will be well arranged, and the whole scheme of exhibits will be sub-divided into easily surveyed groups.

A quite special attention will be paid to the main features affecting the social life of the people.

The Exhibition is essentially wide in its appeal. Scientists, professional men, and the man in the street alike have been considered. The interest touches every grade and every member of Society down to the humblest individual regardless of calling or status. All will carry away some valuable lesson in the field of building and of home equipment.

The Building Industry and its numerous branches and allied trades will be grouped around scientific centres showing the remarkably high development that this industry has attained as a result of the reciprocity of theory and practice.

The exhibits in the various groups will include parts or sections of actual buildings and constructions, as well as reproductions, demonstrations, and other appropriate features.

SUMMARY.

Section I.	—Architecture. 8 Groups with 33 Sub sections.
" II.	—The Literature of Architecture and Building. Technical Educational Institutions. Office Requisites. 3 Groups.
" III.	—Building Materials. Their Manufacture, or Preparation, and Use. 20 Groups with 24 Sub-sections.
" IV.	—Machines, Tools, and Apparatus used in Building. 5 Groups with 2 Sub-sections.
" V.	—Sale and purchase of Building Land. Estate Agencies. Insurances. Book-keeping, etc. 5 Groups.
" VI.	—Building Sanitation for Dwellings, Factories, and Streets. Protection of Workmen during work and other Provisions for their comfort and welfare. Precautions against Fire. 6 Groups.
" VII.	—Gymnastics, Games, and Sports.
" VIII.	—Testing of Building Materials; Technical Demonstrations.
	Exhibition Garden Town of Leipzig-Marienbrunn. Old Town, Village, Recreation Park, etc.

FULL INFORMATION

may be obtained from the Directorium of the International Building Trades Exhibition, Leipzig (1913), or from its Official Bureau in England, 3, Regent Street, London, S.W.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than 6 p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BANBURY.—For erection of forty cottages on a site off Paradise-road. Messrs. Geoffry Lucas & Lodge, architects, 14, Hart-street, Bloomsbury-square, London, W.C.:—

J. Willmott & Sons	£9,255 0 0	W. Corah & Son	£7,140 0 0
S. Orchard & Son	7,997 0 0	W. Cooper	7,070 0 0
C. H. Hunt & Son	7,853 0 0	J. Kimberley	6,983 0 0
Drowley & Co.	7,700 0 0	J. G. Pullen & Son	6,850 0 0
J. Wilford & Sons	7,372 0 0	T. Higgs	6,788 0 0
N. Capel & Sons	7,249 11 4	W. Heap	6,638 0 0
C. Griffiths	7,200 0 0	A. J. Colborne	6,599 0 0
		Bosworth & Lowe, Nottingham*	6,572 0 0

EVESHAM.—For erection of a new drill hall and other work, for the Worcestershire Territorial Association. Messrs. Dicks & Waldron, architects, 1, Market-place, Evesham:—

Wells & Sutton	£2,317	Collins & Godfrey	£1,999
Broad, Ltd.	2,3 0	E. Spicer	1,985
Espley & Co., Ltd.	2,120	J. E. White	1,965
Cliff & Co.	2,060	Dorse	1,925
Tilt Bros.	1,999	Probert, Worcester†	1,836

LONDON.—For supply and erection of internal fencing, and fixing oak boundary fencing and gates at Kilburn Grange, for the London County Council:—

Internal Fencing.

Bayliss, Jones, & Bayliss, Ltd.	£142 12 6	Johnson, Bros., & Co., Ltd.	£133 2 6
T. W. Palmer & Co., Ltd.	134 5 0	J. Elwell, Ltd.	124 5 0
		Hill & Smith, Ltd.	115 7 6

Oak Boundary Fencing and Gates.

Garden Crafts, Ltd.	£170 0	W. Stenning & Son	£75 0
J. & S. Agate, Ltd.	80 0	B. Horton & Son	75 0
J. Stenning & Son, Ltd.	79 0	W. Bowen	59 13

LONDON.—For wiring and fitting for electric lighting at the Crossness Pumping Station, for the London County Council:—

G. Weston & Sons, Ltd.	£196 0 0	S. Hunt	£171 11 6
W. Dickinson & Co.	195 0 0	W. C. Tackley & Co., Ltd.	168 10 0
E. Lawrance & Sons, Ltd.	185 0 0	Tilley Bros.	147 0 0
		Pinching & Walton	139 8 6

LONDON.—For cleaning the interior of the Minaroad School, Walworth, for the London County Council:—

W. F. Blay, Ltd.	£640	Rice & Son	£629
C. Wall, Ltd.	635	J. Garrett & Son	515

LONDON.—For the construction of a new Section House at Stoke Newington. Mr. J. Dixon Butler, F.R.I.B.A., architect, Surveyor to the Metropolitan Police District, New Scotland-yard, S.W. Quantities by Messrs. Thurgood, Son, & Chidgey, 8, Adelphi-terrace, Strand, W.C.:—

C. F. Kearley	£9,100	J. Chessum & Sons	£8,472
W. J. Maddison	8,964	Holliday & Greenwood, Ltd.	8,444
A. Monk	8,925	W. Shurmur & Sons, Ltd.	8,379
C. J. Newby & Bros.	8,900	Dove Bros., Ltd.	8,042
Holloway Bros. (London), Ltd.	8,797	J. Jarvis & Son, Ltd.	7,960
F. & H. F. Higgs	8,724	Sabey & Son, Ltd.	7,892
Higgs & Hill, Ltd.	8,696	C. Wall, Ltd.	7,847
W. Downs	8,663	J. Willmott & Sons	7,749
W. J. Fryer & Co., Ltd.	8,615	J. Grover & Son	7,684
A. E. Symes	8,515		

LONDON.—For the erection of new offices for the National Union of Teachers. Mr. W. H. Woodroffe, F.R.I.B.A., architect:—

Foster & Dicksee, Ltd.	£38,883	Higgs & Hill, Ltd.	£35,840
Holloway Bros., Ltd.	38,050	Perry & Co. (Bow), Ltd.	35,834
Holland & Hannen & Cubitt, Ltd.	37,985	F. & H. F. Higgs	34,880
Leslie & Co., Ltd.	37,783	Harris & Wardrop	34,790
J. Carmichael	37,772	F. G. Minter	34,715
Ashby & Horner	37,274	Patman & Fotheringham, Ltd.	33,943
W. Johnson & Co., Ltd.	37,185	W. Lawrence & Son	33,670
H. Knight & Sons	36,277	Sabey & Son, Ltd.	33,638
		G. E. Wallis & Sons, Ltd.*	33,330

MELKSHAM (Wilts).—For Melksham Picture House. Messrs. Bennett & Stratton, architects, Finchley:—

J. T. Roberts	£3,330	Watts & Co.	£2,833
Light, Son, & Co., Ltd.	3,129	Parsons Bros.	2,425
Drew & Sons	3,111	E. Linzey & Sons	2,094
H. Ash	3,030	Bigwood & Co., Melksham*	1,990
Downing & Rudman	3,017		

PORT TALBOT.—For new shop-front and fixtures at the Co operative Stores, Pontrhydyfen. Messrs. Evans & Jones, M.S.A., architects, Port Talbot:—

Bristol Joinery and Shopfitting Co.	£288	7	6
J. H. Webb	194	18	0
W. Rosser	194	7	6
H. Fisher	186	0	0
J. Nicholas	175	0	0
Thomas & Jones, Pontrhydyfen*	160	0	0

TROWBRIDGE.—For proposed alterations and additions to St. George's Foundry, Trowbridge, Wilts, for the Wilts United Dairies, Ltd. Messrs. Bennett & Stratton, architects, Finchley. Quantities by Mr. Ernest E. Richardson, P.A.S.I., 5, John-street, Bedford-row, W.C.:—

Long	£5,328	Parsons Bros.	£4,317
Rendell	4,860	Downing & Rudman	4,297
Chivers & Co.	4,645	E. Linzey & Sons	4,250
Long	4,567	Watts & Co.	4,037
Light	4,469	Bigwood & Co., Melksham*	3,750
Haywood & Wooster	4,443		

TWYFORD (Berks).—For the erection of a house, Wargrave-road, Twyford, for Mr. F. Ayres. Mr. H. Stanton Webber, F.S.I., architect, 23, Queen-street, Maidenhead:—

G. Robinson	£620	0	0	W. Creed	£572 0 0
F. Pearce	592	3	6	W. Goodchild	550 0 0
T. Newbury	578	0	0	J. Wigmore	550 0 0
W. Dully	575	0	0		

WESTON-SUPER-MARE.—For the erection of the Regent-street Picture Theatre, Weston-super-Mare Mr. W. H. Watkins, F.R.I.B.A., architect, 15, Clare street, Bristol:—

H. W. Pollard & Son	£7,490	Chas. Addicott	£6,850
R. F. Ridd & Sons	7,180	C. A. Hayes & Sons.	6,819
W. Cowlin & Sons	6,990	R. Wilkins & Sons	6,698

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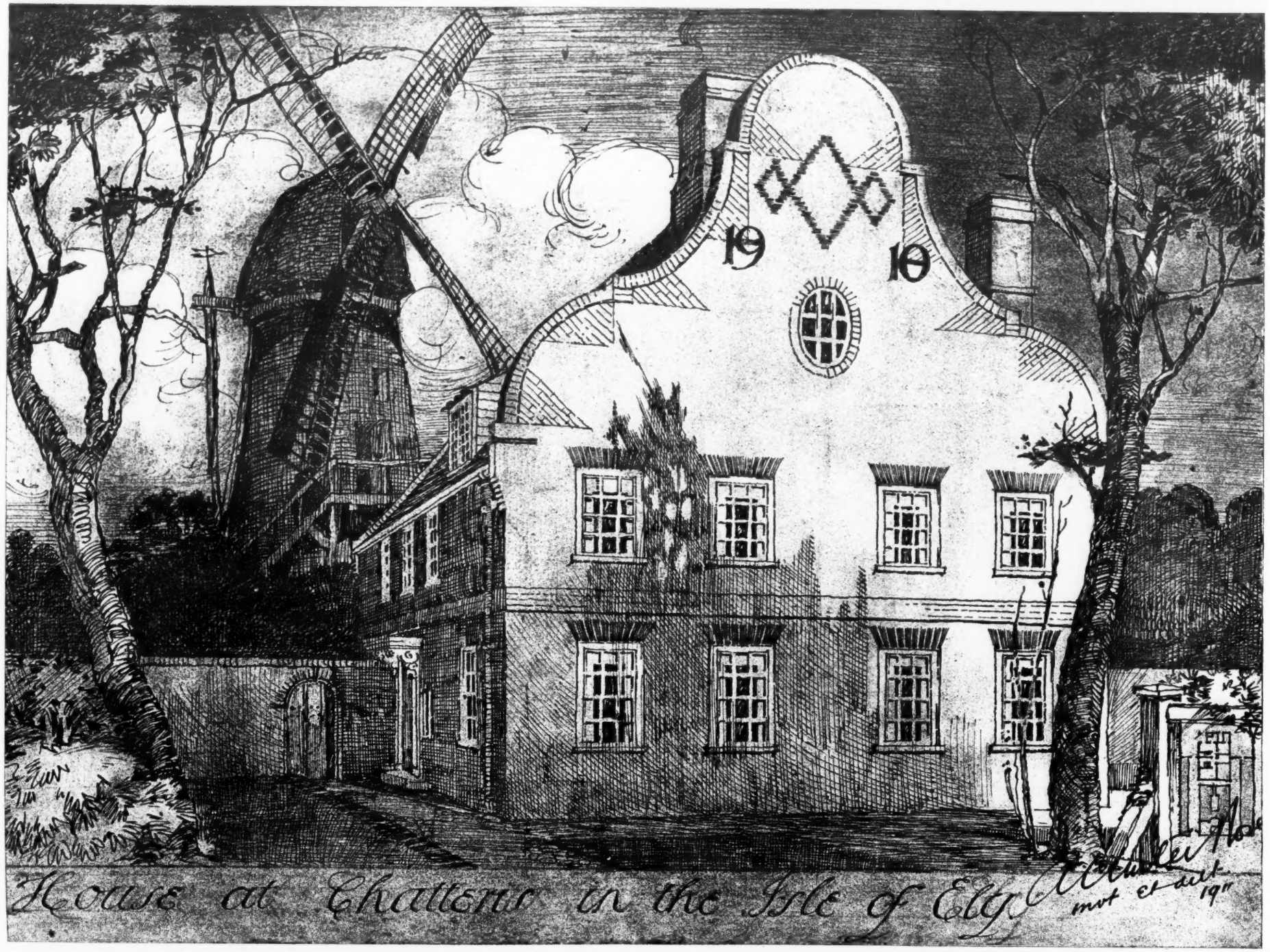

HOUSE AT CHATTERIS, CAMBRIDGESHIRE.—Mr. A. Winter Rose, Architect.

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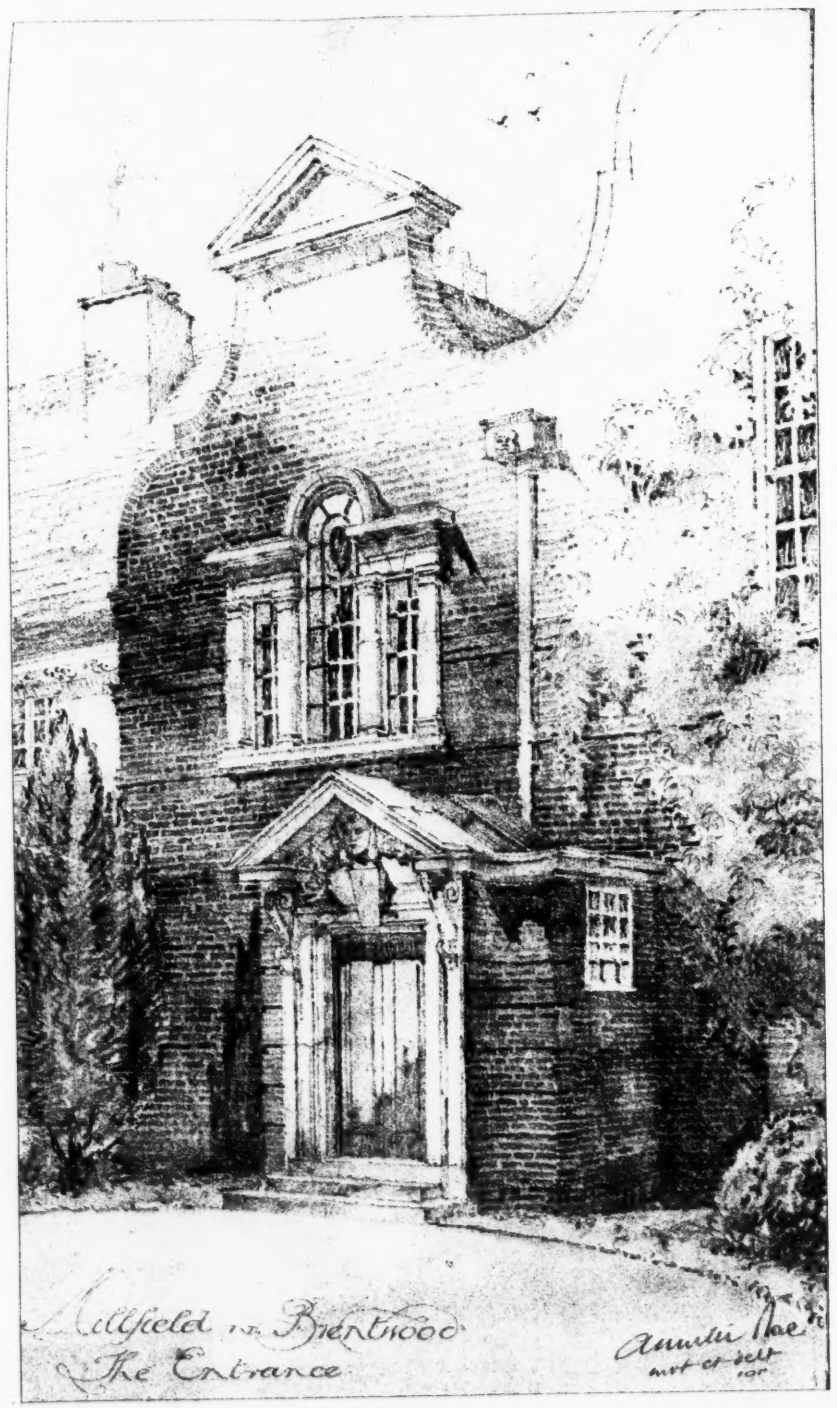
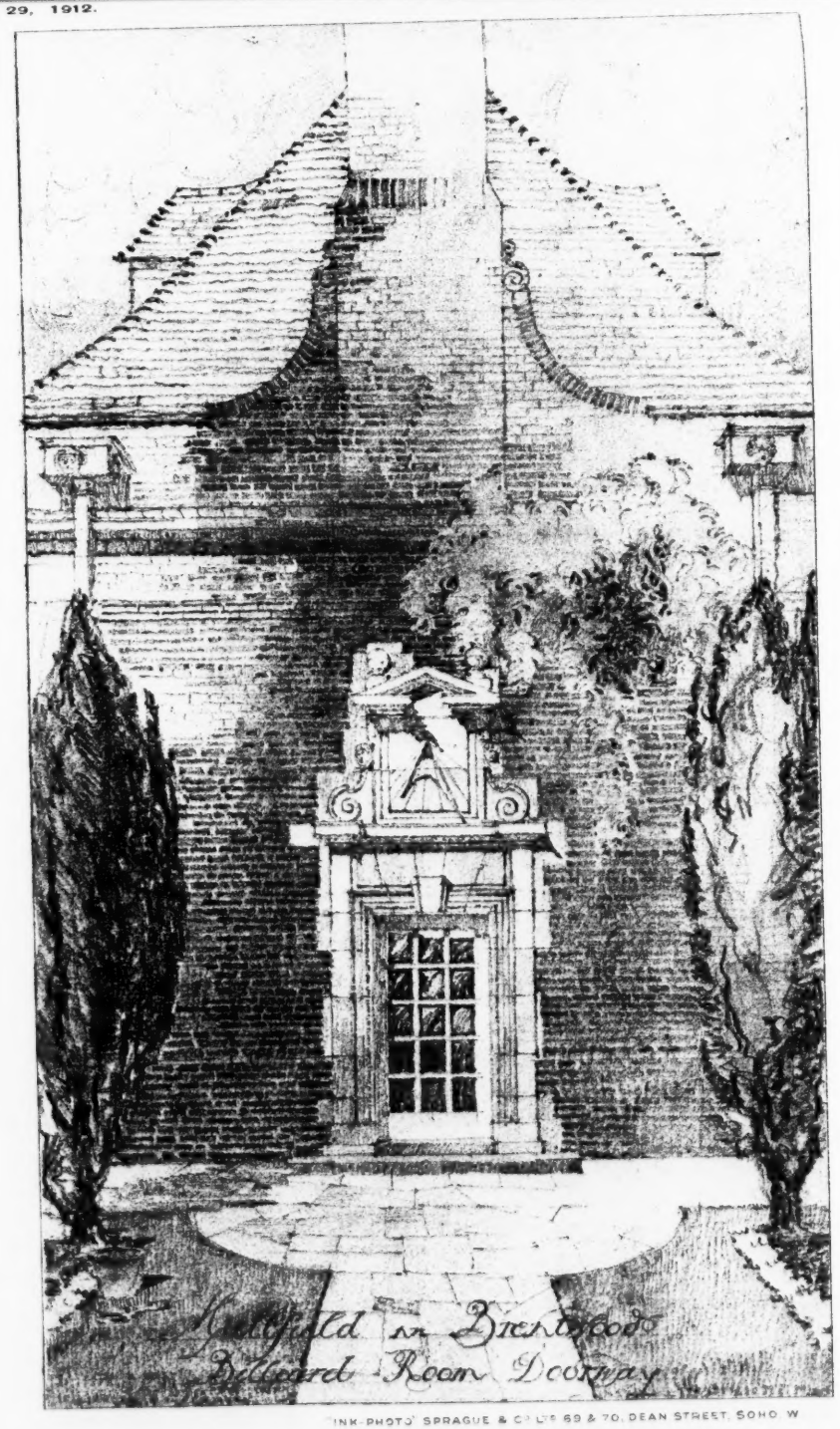
HOUSE AT CHATTERIS, CAMBRIDGESHIRE.—Mr. A. Winter Rose, Architect





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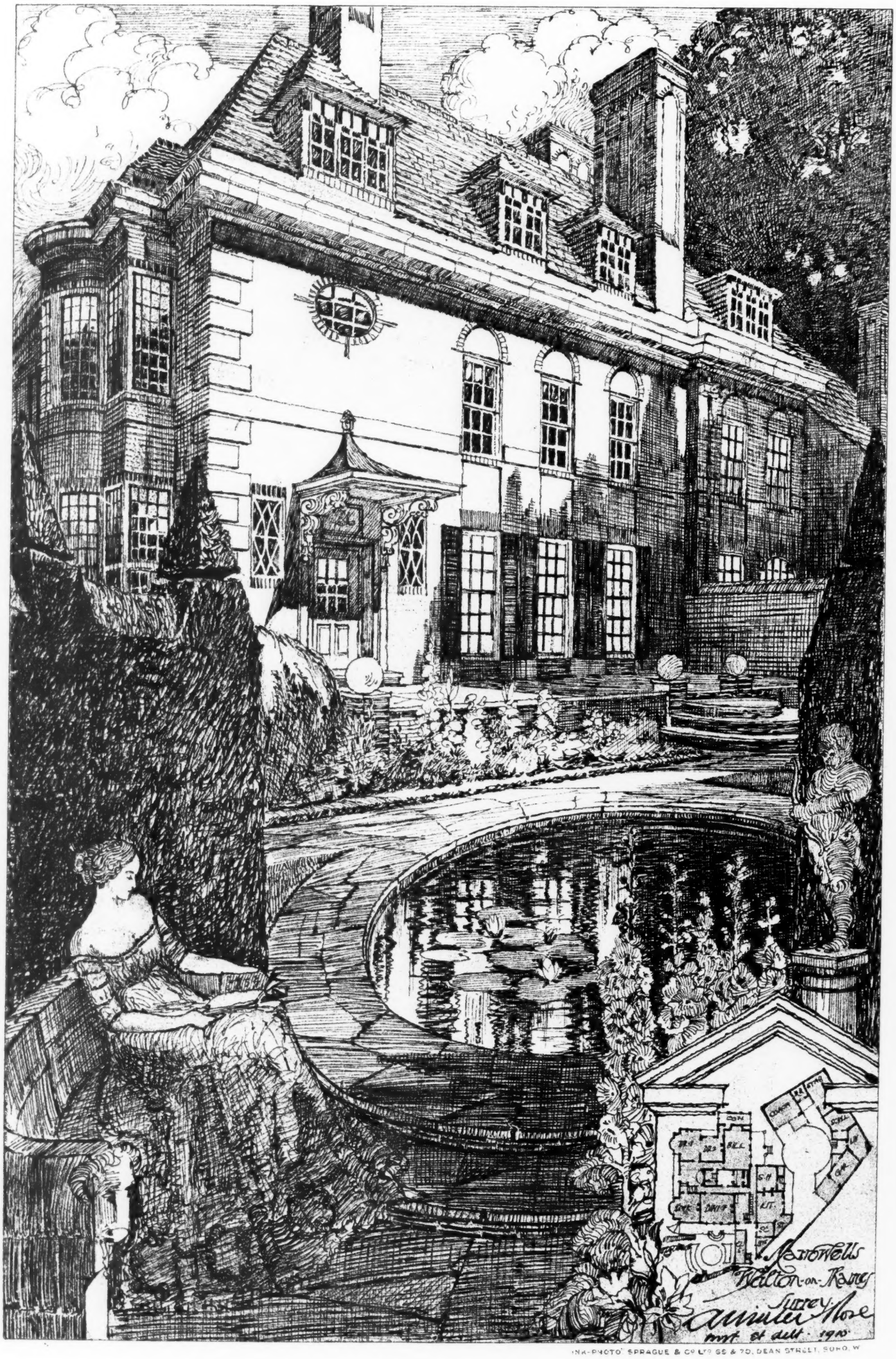
TWO DOORWAYS AT "MILLFIELD," NEAR BRENTWOOD, ESSEX.—Mr. A. Winter Rose, Architect



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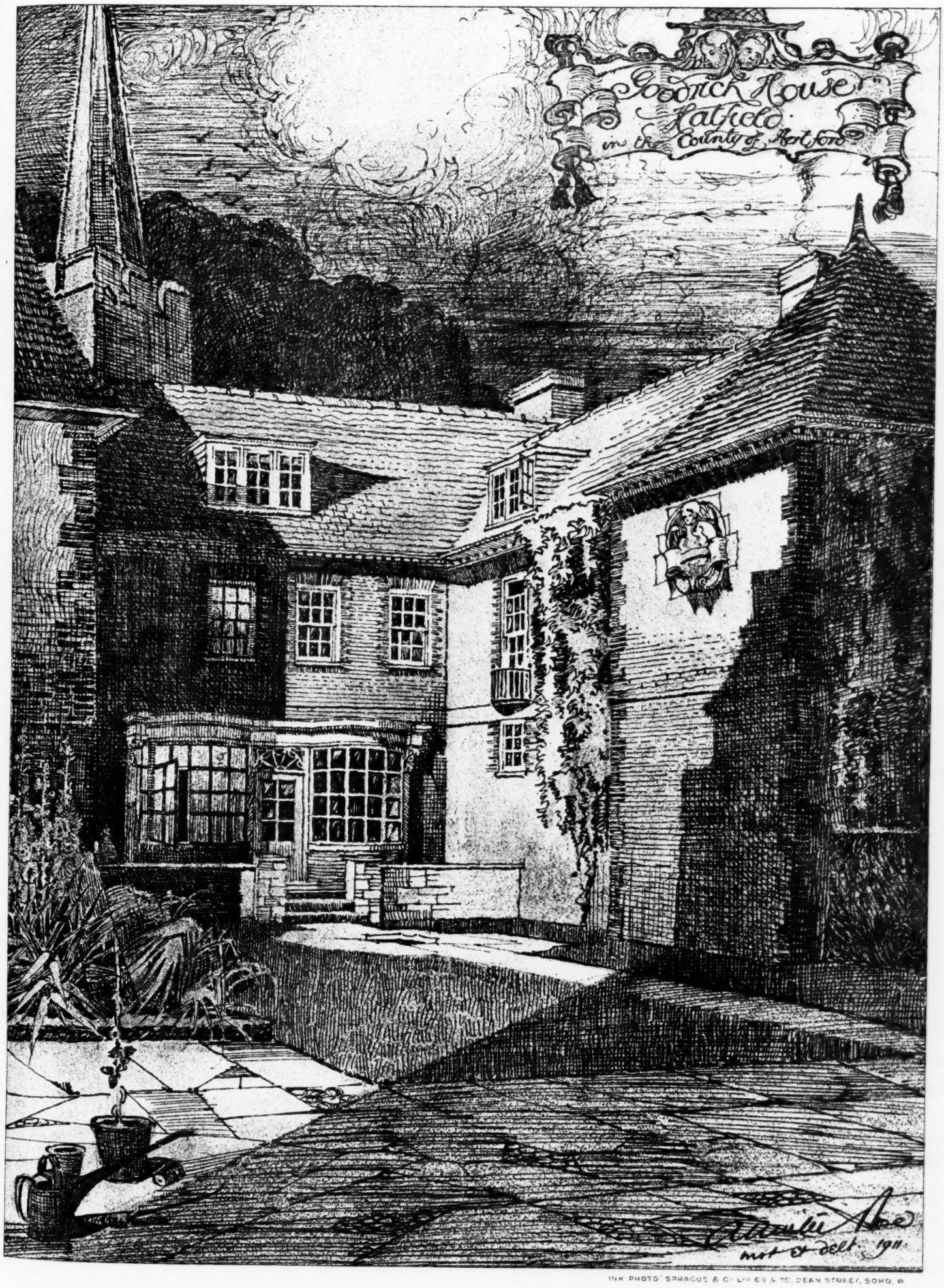

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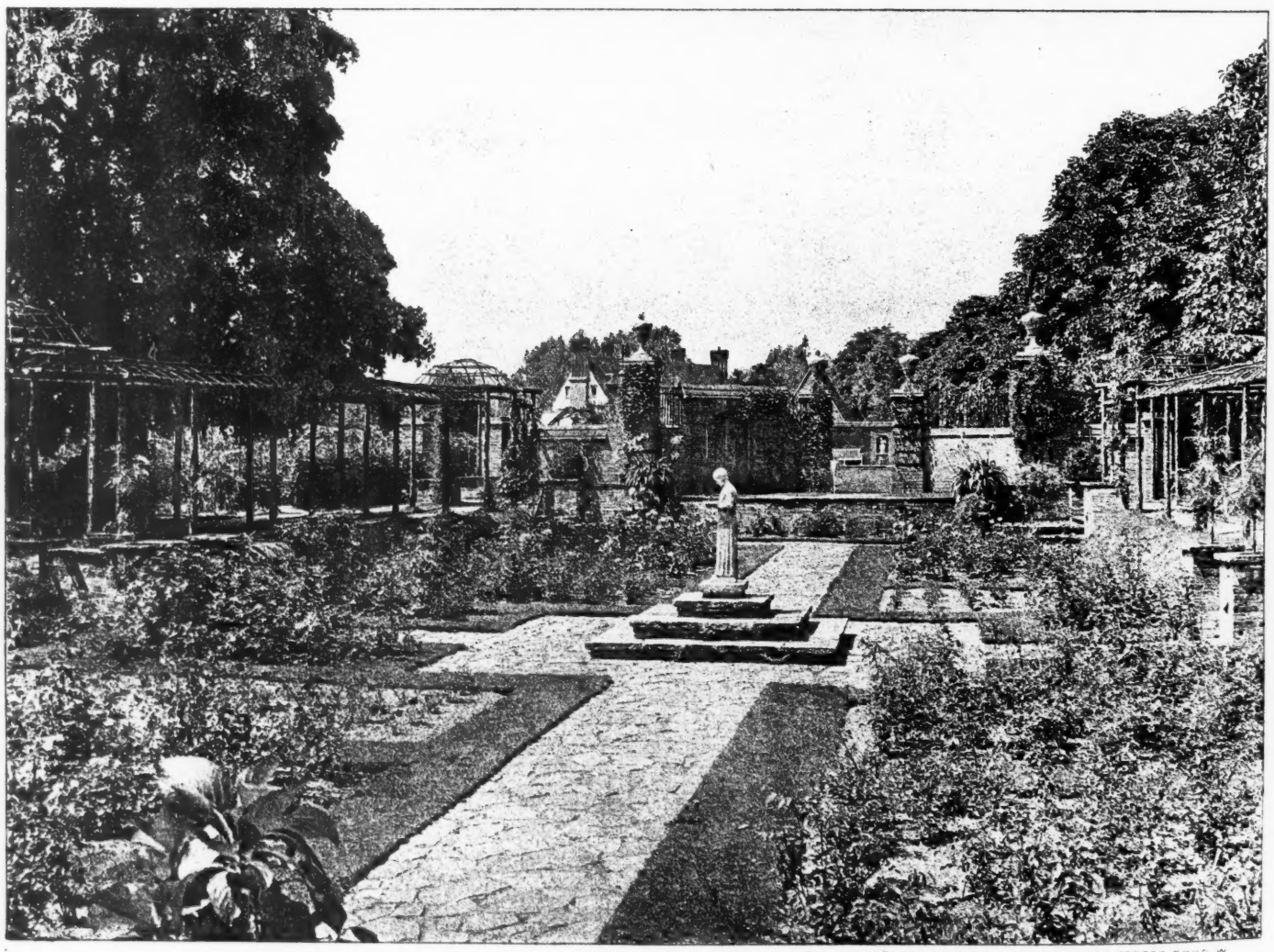

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VIEW OF ROSE GARDEN LOOKING WEST.

"MARROWELLS," WALTON-ON-THAMES.—Mr. A. Winter Rose, Architect.

"CLOISTER GARTH," PURLEY.—Mr. A. Winter Rose, Architect.

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'MILLFIELD,' NEAR BRENTWOOD, ESSEX.—Mr. A. Winter Rose, Architect.